

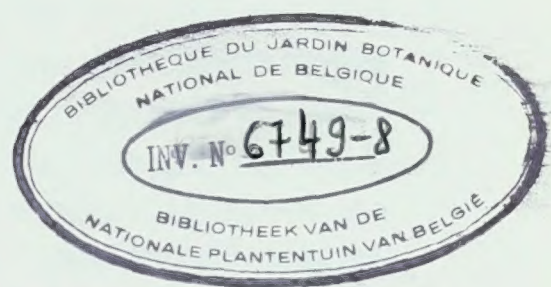
C. Cocquyt
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A check-list of the algal flora of the East African Great Lakes



C. Cocquyt, W. Vyverman
& P. Compère

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(Malawi, Tanganyika
and Victoria)**



Meise
National Botanic Garden of Belgium
1993

Scripta Botanica Belgica

Miscellaneous documentation
edited by the National Botanic Garden of Belgium

Series editor: E. Robbrecht

Volume 8

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CIP Royal Library Albert I, Brussels

A check-list of the algal flora of the East African Great Lakes (Malawi, Tanganyika and Victoria). C. Cocquyt, W. Vyverman and P. Compère. — Meise: Ministry of Agriculture. Administration of Agricultural Research. National Botanic Garden of Belgium, 1993. — 55 p.; 24.5 cm. — (Scripta botanica Belgica; Vol. 8).

ISBN 90-72619-15-3

ISSN 0779-2387

D/1993/0325/5

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Printed in Belgium by Universa Wetteren

Introduction

The first publications on the algal flora of the East African great lakes date back from the end of last century. In 1880, DICKIE studied a small collection of algae, attached on aquatic phanerogames, from Livingstone's mission on the shores of Lake Nyasa (now also called Lake Malawi). In 1898 SCHMIDLE published on the desmids from East Africa; a year later, the first work on planktonic algae from Lake Malawi was published by the same author (SCHMIDLE 1899). SCHMIDLE continued his research on the algae from Lake Malawi, resulting in more papers at the beginning of this century (1902 a,b). In the early twentieth century, Lake Malawi had attracted the attention of other scientists (ENGLER 1902, MÜLLER 1903, 1904, 1905, 1914). During this period, the first records of algae from Lake Tanganyika, collected during the third Tanganyika expedition, conducted by Dr. Cunningham, were published by WEST (1907). From 1908 till 1933, several scientists were interested in the algal flora of Lake Victoria (BACHMAN 1933, BORGE 1928, OSTENFELD 1908, 1909, SCHRÖDER 1912, VIRIEUX 1913, WOLOSZYNSKA 1914).

After this first period of rather intensive research on the algal communities in the three East African great lakes, no reports on phytoplankton investigation were published during the following two decades. A renewed interest in the taxonomy of the algae can be noticed after the second world war, when new expeditions to the lakes were organised. A survey of the algal flora of the East African Rift area was given by VAN MEEL (1954). Research was done on the algae of the great lakes (EVANS 1962, RICHARDSON 1964, ROSS 1953, 1955, TALLING 1965 a,b). Sediment cores from Lake Tanganyika were studied (KUFFERATH 1956), and reports on blue-green algae for the last mentioned lake were given (SYMOENS 1955 a,b, 1956). Investigations on diatoms were undertaken in Lake Malawi (MONTEIRO 1960, 1963). In Lake Victoria, phytoplankton was examined (TALLING 1966, 1987, THOMASSON 1955), with special attention to desmids (GRÖNBLAD et al. 1964). However most studies were focused on the ecology of phytoplankton communities (e.g. HABERYAN & MHONE 1991, HECKY et al. 1978, 1981, 1987, TALLING 1965 a, b).

The present-day concern about pollution and the conservation of biodiversity, undoubtedly stimulated recent systematic investigations

of the algal flora. During the last years, Lake Tanganyika has attracted most attention (CALJON 1987 a, CALJON & COCQUYT 1992, COCQUYT 1991, KOCIOLEK & STOERMER 1991, 1993), followed by Lake Malawi (KLEE et al. 1990, KLEE & CASPER 1992, VYVERMAN & COCQUYT 1993). However, much less work has been done recently on Lake Victoria. While in the past planktonic communities received most attention, recent studies focused on littoral and benthic communities.

Nomenclatural and taxonomic revisions of the algal flora during the last years, resulted in important changes of the taxa. The revisions were mainly done on temperate algae, and were made possible thanks to the development of new microscopic techniques (e.g. scanning and transmission electron microscopy, interference microscopy, ...). These important changes in the algal taxonomy, and the renewed extensive scientific interest in the three East African great lakes — Lake Malawi, Lake Tanganyika and Lake Victoria — was the main stimulus for the preparation of an up-to-date check-list of the three East African great lakes. However, the amount of research done on the algal flora of Lake Tanganyika, especially of benthic and littoral communities, was greater than for Lake Malawi and Lake Victoria. This resulted in a greater number of taxa reported from Lake Tanganyika (COCQUYT & VYVERMAN 1993 b).

The taxonomical groups, represented by the greatest number of infrageneric taxa, are the Bacillariophyta, followed by the Chlorophyta in Lake Nyasa and Lake Tanganyika. In Lake Victoria the Chlorophyta are most extensively studied, resulting in a greater number of reported infrageneric taxa than in the Bacillariophyta. The present list takes into account the recent evolution in taxonomy and nomenclature. However, revision is needed for many tropical taxa and populations of cosmopolitan species in the tropics. Moreover, it was not possible to check all records, so that it remains possible that literature records of a number of taxa are based on erroneous identifications.

The numbers of infrageneric taxa and genera per major taxonomic group, recorded from Lake Malawi, Lake Tanganyika and Lake Victoria are shown in the following table:

Taxonomic group	Total		L. Malawi		L. Tanganyika		L. Victoria	
Cyanophyta	171	34	40	21	111	28	69	19
Chlorophyta	532	102	161	45	224	78	295	54
Euglenophyta	66	9	10	6	59	8	2	1
Dinophyta	26	6	6	4	19	5	10	4
Xanthophyta	12	5	2	1	4	2	6	3
Chrysophyta	24	17	-	-	21	15	3	3
Cryptophyta	14	5	-	-	14	5	-	-
Prymnesiophyta	1	1	-	-	1	1	-	-
Bacillariophyta	626	49	289	37	474	43	215	33
total	1472	228	508	114	927	185	601	117

In the check-list, the classification of the algae, given by ROUND (1981), is followed at the level of the phyla. For the diatoms the classification of subclasses and orders is after BOURRELLY (1968). Nomenclature follows in most cases KRAMMER & LANGE-BERTALOT (1986, 1988, 1991 a,b). VANLANDINGHAM (1967-1979) and PATRICK & REIMER (1966, 1975) were also consulted. For the genera *Fragilaria* and *Synedra*, where many taxonomical problems remain unsolved, we followed HUSTEDT (1931-1959). For the Cyanophyta, GEITLER (1932) and several smaller publications (e.g. KOMAREK & KLING 1991) were followed; KOMAREK & FOTT (1983) were followed for the Chlorococcales, PRESCOTT et al. (1975, 1977, 1981), RUZICKA (1977, 1981) and CROASDALE et al. (1983) for the Desmidiaceae; HUBER-PESTALOZZI (1955) and STARMACH (1983) for the Euglenophyta; STARMACH (1985) for the Chrysophyta; Ettl (1985) for the Xanthophyta and FOTT (1968) for the Cryptophyta. In many cases other publications were consulted to resolve certain taxonomic and nomenclatural problems.

A list of synonyms used in earlier publications is given after the check-list (p. 35), together with nomenclatural and taxonomic comments on some taxa.

Check-list

The following abbreviations are used:

N : Lake Nyasa/Lake Malawi

T : Lake Tanganyika

V : Lake Victoria

* : taxon cited from lake(s) under synonym(s); cf. list of synonyms p. 35

** : cf. nomenclatural or taxonomic comment in list of synonyms

[] : used to indicate combinations not available

e.g. *Aulacoseira italica* (Ehr.) Sim. [var. *plicatella* O. Müll.] is *Melosira italica* var. *plicatella* O. Müll.; the combination for the variety under *Aulacoseira* has not been published (see taxonomic comments)

The following abbreviations of authors names are used:

Ag. : C. Agardh

Ahlstr. : Ahlstrom

Allm. : Allman

Arch. : Archer

Bachm. : Bachmann

Beij. : Beijerinck

Belch. : Belcher

Bern. : Bernard

Berk. : Berkeley

Biss. : Bisset

Bodr. : Bodrog

Bohl. : Bohlin

Börg. : Börgesen

Born. : Bornet

Bourr. : Bourrelly

Boye-Pet. : Boye-Petersen

A. Br. : A. Braun

Bréb. : Brébisson

Brunnth. : Brunnthaler

Bruz. : A. Bruzelius

Bulnh. : Bulnheim

Calj. : Caljon

Cart. : Carter

Chod. : Chodat

Choln. : Cholnoky

Cl. : P. Cleve

Conr. : Conrad

Croasd. : Croasdale

Dad. : Daday

Dang. : Dangeard

Defl. : Deflandre

Delp. : Delponte

De Not. : De Notaris

De Saed. : De Saedeleer

De Wild. : De Wildeman

Dillw. : Dillwyn

Drezep. : Drezepolski

Dujard. : Dujardin

Ehr. : Ehrenberg

Elenk. : Elenkin

Elfv. : Elfving

Fl. : Flahault

Gardn. : Gardner

Geor. : Georges

Gom. : Gomont

Grun. : Grunow

Greg. : Gegory

Gerl. : Gerloff

Grev. : Greville

Grönb. : Grönblad

Gutw. : Gutwinski

Hansg. : Hansgirk

Hass. : Hassal

Heib. : Heiberg

Hérib. : Héribaude

Hieron. : Hieronymus

Hind. : Hindak	Pasch. : Pascher
Hollerb. : Hollerbach	Pank. : Pankow
Hortob. : Hortobagyi	Pant. : Pantocsek
Hub.-Pest. : Huber-Pestalozzi	Pen. : Penard
Hust. : Hustedt	Perag. : Peragallo
Istv.-Schaarsch. : Istvanffi-Schaarschmidt	Phil. : Philipose
Itzigs. : Itzigsohn	Playf. : Playfair
Josh. : Joshua	Pochm. : Pochmann
Keissl. : Keissler	Pouz. : Pouzar
Kirchn. : Kirchner	Pringsh. : Pringsheim
Kof. : Kofoed	Rabh. : Rabenhorst
Kom. : Komarek	Racib. : Raciborski
Kom.-Legn. : Komarkova-Legnerova	Richt. : Richter
Kors. : Korshikov	Roxb. : Roxburgh
Kram. : Krammer	Ruttn. : Ruttner
Krieg. : Krieger	Ruzick. : Růžicka
Kütz. : Kützing	Sauvag. : Sauvageau
Lack. : Lackey	Scherff. : Scherffel
Lagerh. : Lagerheim	Schill. : Schiller
Lauterb. : Lauterborn	Schröd. : Schröder
Lef. : Lefèvre	Schröt. : Schröter
Lenorm. : Lenormand	Sim. : Simonsen
Lgst. : Lagerstedt	Spreng. : Sprengel
L.-B. : Lange-Bertalot	Sull. : Sullivan
Lemm. : Lemmermann	Swir. : Swirenko
Lill. : Lillieroth	W.R. Tayl. : W.R. Taylor
Lind. : Lindemann	Teil. : Teiling
L. : Linnaeus	Thom. : Thomasson
Lund. : Lundell	Thunm. : Thunmark
Lütkem. : Lütkemüller	Thur. : Thuret
Lyngb. : Lyngbye	Tiff. : Tiffany
Marss. : Marsson	Tranc. : Trancanna
Menegh. : Meneghini	Turn. : Turner
Mert. : Mertens	Turp. : Turpin
Miq. : F.A.G. Miquel	Uterm. : Utermöhl
Mill. : Miller	Vauch. : Vaucher
Moeb. : Moebius	V.H. : Van Heurck
Mont. : Montagne	Vir. : Virieux
Morr. : Morren	Visch. : Vischer
O. Müll. : O. Müller	West & West : W. West & G.S. West
O.F. Müll. : O.F. Müller	Willd. : Willdenow
Näg. : Nägeli	Wittr. : Wittrock
Naum. : Naumann	Wolosz. : Woloszynska
Nordst. : Nordstedt	R.D.W. : R.D. Wood
Nyg. : Nygaard	Zach. : Zacharias
Ostenf. : Ostfeld	

CYANOPHYTA

N T V

Anabaena Bory ex Born. & Fl.

<i>A. circinalis</i> Rabh. ex Born. & Fl.	-	x	x
<i>A. discoidea</i> (Schmidle) Ostenf.	-	-	x
<i>A. flos-aquae</i> Bréb. ex Born. & Fl.			
var. <i>flos-aquae</i>	x	x	x
f. <i>aptekariana</i> Elenk.	-	x	-
f. <i>spiroides</i> Voronik.	-	-	x
<i>A. fuellebornii</i> Schmidle	-	x	-
<i>A. hyalina</i> Schmidle	x	-	-
<i>A. inaequalis</i> Born. & Fl.	x	-	-
<i>A. sphaerica</i> Born. & Fl.	x	-	-
<i>A. spiroides</i> Klebahn	-	-	x
var. <i>minima</i> Nyg.	-	-	x
<i>A. variabilis</i> Kütz. ex Born. & Fl.	-	x	-
<i>A. westii</i> Vir.	-	-	x
<i>Anabaena</i> sp.	-	x	-

Anabaenopsis Mill.

<i>A. circularis</i> (G.S. West) Mill.*	-	x	x
<i>A. cunningtonii</i> W.R. Tayl.	-	x	-
<i>A. tanganyikae</i> (G.S. West) Mill.	-	x	x
<i>Anabaenopsis</i> sp.	-	x	-

Aphanocapsa Näg.

<i>A. delicatissima</i> West & West	-	x	x
<i>A. elachista</i> West & West			
var. <i>conferta</i> West & West	-	x	-
var. <i>elachista</i>	-	x	x
f. <i>planctonica</i> G.M. Smith	-	x	-
<i>A. hyalina</i> (Lyngb.) Hansg.	x	-	-
<i>A. nubilum</i> Kom. & Kling	-	-	x
<i>A. pulchra</i> (Kütz.) Rabh.	-	x	-
<i>Aphanocapsa</i> sp.	-	x	-

Aphanothece Näg.

<i>A. clathrata</i> West & West			
var. <i>brevis</i> Bachm.	-	x	-
var. <i>clathrata</i>	-	x	x
<i>A. elabens</i> (Bréb.) Elenk.*	x	x	x
<i>A. microscopica</i> Näg.	x	x	-
<i>A. nidulans</i> Richt.	-	x	-
<i>A. pulverulenta</i> Bachm.	-	-	x
<i>A. stagnina</i> (Spreng.) A. Br.	-	-	x
<i>Aphanothece</i> sp.	-	x	-

Calothrix Ag. ex Born. & Fl.

<i>C. braunii</i> Born. & Fl.	x	x	x
<i>C. brevissima</i> G.S. West	-	x	x
<i>C. epiphytica</i> West & West	x	x	-
<i>C. fuellebornii</i> Schmidle	x	-	-
<i>C. parietina</i> Thur. ex Born. & Fl.	-	-	x

Chamaesiphon Braun

<i>C. incrustans</i> Grun.	x	x	x
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Chroococcus Näg.

<i>C. confervicola</i> A.Br.	-	x	x
<i>C. helveticus</i> Näg.	-	x	-
<i>C. limneticus</i> Lemm.*	-	x	x
<i>C. minimus</i> (Keissl.) Lemm.	x	-	-
<i>C. minor</i> (Kütz.) Näg.			
f. <i>dispersus</i> Keissl.*	-	x	x
<i>C. minutus</i> (Kütz.) Näg.*	-	x	-
<i>C. pallidus</i> Näg.	-	-	x
<i>C. parallelipipedon</i> Schmidle	x	-	x
<i>C. turgidus</i> (Kütz.) Näg.*	x	x	x
<i>Chroococcus</i> sp.	x	-	-

Coelosphaerium Näg.

<i>C. kuetszingianum</i> Näg.	-	-	x
<i>C. minutissimum</i> Lemm.	-	-	x

Cylindrospermopsis Seenayya
et Subba

<i>C. africana</i> Kom. & Kling	-	-	x
<i>C. cuspidata</i> Kom. & King	-	-	x

Cylindrospermum Kütz. ex
Born. & Fl.

<i>C. goetzei</i> Schmidle	-	x	-
<i>C. nyassae</i> Dickie	x	-	-

Gloeothrichia Ag. ex
Born. & Fl.

<i>G. echinulata</i> (J.E. Smith) Richt.	-	x	-
<i>G. longiarticulata</i> G.S. West	x	-	-
<i>G. natans</i> Rabh. ex Born. & Fl.	-	x	-

Gomphosphaeria Kütz.

<i>G. aponina</i> Kütz.	-	x	x
var. <i>multiplex</i> Nyg.	-	-	x
<i>G. lacustris</i> Chod.	x	-	x

<i>G. pusilla</i> (Van Goor) Kom. & Ettl	- x -	<i>M. flos-aquae</i> (Wittr.) Kirchn.*	- x x
Homoeothrix (Thur.) Kirchn.		<i>M. marginata</i> (Menegh.) Kütz.	- - x
<i>H. cartilaginea</i> (G.S. West) Lemm.*	- x -	<i>M. ochracea</i> (Brand.) Lemm.	- - x
<i>H. juliana</i> (Born. & Fl.) Kirchn.*	x - -	<i>M. prasina</i> (Wittr.) Lemm.	x - -
Lyngbya Ag. ex Gom.		<i>M. pulvereae</i> (Wood ex Hansg.) Forti	
<i>L. aerugineo-coerulea</i> Gom.	- x -	var. <i>incerta</i> (Lemm.) Crow*	- x x
<i>L. aestuarii</i> Liebm. ex Gom.	- - x	f. <i>pulchra</i> (Lemm.) Elenk.*	- x -
<i>L. bipunctata</i> Lemm.	x x -	var. <i>pulvereae</i>	- x -
<i>L. circumcreta</i> G.S. West	- - x	<i>M. robusta</i> (Clark) Nyg.	- - x
<i>L. digueti</i> Gom.	- x -	<i>M. scripta</i> (Richt.) Migula	- - x
<i>L. epiphytica</i> Hieron.	- - x	<i>M. viridis</i> (A. Br.) Lemm.	x - x
<i>L. kuetzingii</i> Schmidle		<i>M. wesenbergii</i> Kom.	- - x
var. <i>distincta</i> (Nordst.) Lemm.	- - x	Nodularia Mert. ex Born. & Fl.	
var. <i>kuetzingii</i>	- - x	<i>N. harveyana</i> Thur. ex Born. & Fl.*	
<i>L. lagerheimii</i> Gom.	- - x	var. <i>harveyana</i>	- x -
<i>L. limnetica</i> Lemm.	- x x	var. <i>sphaerocarpa</i> (Born. & Fl.) Elenk.	- x -
<i>L. martensiana</i> Menegh. ex Gom.	x x -	<i>N. tenuis</i> G.S. West	- x -
<i>L. nyassae</i> Schmidle	x - x	Nostoc Vauch. ex Born. & Fl.	
<i>L. perelegans</i> Lemm.	- x -	<i>N. carneum</i> Ag. ex Born. & Fl.	- x -
<i>L. purpurea</i> Gom.	- x -	<i>N. paludosum</i> Kütz. ex Born. & Fl.	x - -
<i>L. putealis</i> Mont. ex Gom.	- x -	<i>N. piscinale</i> Kütz. ex Born. & Fl.	- x -
<i>L. versicolor</i> Gom.	x x x	Nostochopsis Wood ex Born. & Fl.	
Merismopedia Meyen		<i>N. goetzei</i> Schmidle	x - -
<i>M. aeruginea</i> Bréb.	- x -	Oscillatoria Vauch. ex Gom.	
<i>M. elegans</i> A. Br. ex Kütz.		<i>O. agardhii</i> Gom.	- x -
var. <i>elegans</i>	x x x	<i>O. amphibia</i> Ag. ex Gom.	- - x
var. <i>remota</i> G.S. West	- x -	<i>O. cortiana</i> Menegh. ex Gom.	- x -
<i>M. glauca</i> (Ehr.) Näg.	x x x	<i>O. curviceps</i> Ag. ex Gom.	- x -
<i>M. minima</i> G. Beck	- x -	<i>O. formosa</i> Borge ex Gom.	- x -
<i>M. punctata</i> Meyen	x x x	<i>O. geminata</i> Menegh. ex Gom.	x x -
<i>M. tenuissima</i> Lemm.	- x x	<i>O. granulata</i> Gardn.	- x -
Microchaete Thur. ex Born. & Fl.		<i>O. limnetica</i> Lemm.	- x -
<i>M. investiens</i> Fremy	- x -	<i>O. limosa</i> Gom.	- x -
Microcoleus Desmazières ex Gom.		<i>O. obtusa</i> Gardn.	- x -
<i>M. vaginatus</i> (Vauch.) Gom.		<i>O. princeps</i> Vauch. ex Gom.	- x -
var. <i>monticola</i> (Kütz.) Gom.	x - -	<i>O. proteus</i> Skuja	- x -
Microcystis Kütz.		<i>O. pseudogeminata</i> G. Schmid	- x -
<i>M. aeruginosa</i> (Kütz.) Kütz.*	x x x	<i>O. quadripunctulata</i> Bruhl & Biswas var. <i>unigranulata</i> Singh	- x -
<i>M. densa</i> West & West	- x -	<i>O. sancta</i> Gom.	x - -
<i>M. firma</i> (Kütz.) Schmidle	x - -	<i>O. schultzei</i> Lemm.	- x -

O. splendida Grev. ex Gom.

var. *attenuata* West x

O. subbrevis Schmidle - x

O. tanganyikae G.S. West x -

O. tenuis Ag. ex Gom. x x

var. *natans* (Kütz.) Gom. x -

O. terebriformis Ag. ex Gom. - x -

O. willei Gardn. - x -

Phormidium Kütz. ex Gom.

P. ambiguum Gom. - x -

P. angustissimum West & West - x x

P. autumnale Gom. - x x

P. corium Kütz. ex Gom. - x -

P. foveolarum Gom. x -

P. inundatum Kütz. ex Gom. x -

P. lucidum Kütz. ex Gom. - - x

P. mucicola Naum. & Hub.-Pest. - - x

P. papyraceum Gom. - x -

P. tenue Gom. - x -

Planktolyngbya Anagnostidis & Kom.

P. tallingii Kom. & Kling - - x

P. undulata Kom. & Kling - - x

Plectonema Thur. ex Frank

P. mirabile Thur. ex Frank* - x -

P. wollei Farlow ex Gom. - x -

Pseudanabaena Lauterb.

P. catenata Lauterb. - x -

P. limnetica (Lemm.) Kom. - x -

P. moniliformis Kom. & Kling - - x

Pseudoanabaena sp.1* - - x

Pseudoanabaena sp.2* - - x

Rhabdoderma Schmidle et Lauterb.

R. sigmoidea More & Cart. - - x

R. tenuissimum Kom. & Kling - x

Rivularia Ag. ex Born. & Fl.

R. aquatica De Wild. - x -

R. dura Roth - x -

R. globiceps G.S. West - x -

Schizothrix Kütz. ex Gom.

S. lacustris A. Br. ex Gom. - x -

Scytonema Ag. ex Born. & Fl.

S. cinnatum Thur. ex Born.
& Fl.* x x -

S. figuratum Ag. ex Born. & Fl.* - x -

Spirulina Turp. ex Gom.

S. jenneri Kütz. ex Gom. - x -

S. laxissima G.S. West - x x

S. major Kütz. ex Gom. - x -

S. princeps West & West x - -

S. subsalsa Oersted ex Gom. *

var. *crassior* (Vir.) Geitler - x -

var. *subsalsa* x - -

S. subtilissima Kütz. ex Gom. - x -

Synechococcus Näg.

S. leopoliensis (Racib.) Kom.* - x -

Synechocystis Sauvag.

S. aquatilis Sauvag. - x -

Tolypothrix Kütz. ex Born. & Fl.

T. tenuis Kütz. emend. Schmidt - x -

CRYPTOPHYTA

Chroomonas Hansg.

C. angusta Calj. - x -

C. nordstedtii Hansg. - x -

Cryptomonas Ehr.

C. erosa Ehr. - x -

var. *erosa* - x -

var. *reflexa* Marss. - x -

C. cf. obovata Skuja - x -

C. ovata Ehr. x -

var. *ovata* - x -

var. *curvata* Lemm. - x -

Cryptaulax Skuja

C. conoidea Skuja - x -

Cryptaulax sp. - x -

Kathablepharis Skuja

K. ovalis Skuja - x -

Rhodomonas Karsten

R. lacustris Pasch. & Ruttn. - x -

R. lens Pasch. & Ruttn. - x -

R. minuta Skuja - x -

var. minuta - x -

var. nannoplanktonica Skuja - x -

CHLOROPHYTA**VOLVOCALES****Carteria** Diesing

C. multifilis Dill - - x

Chlamydomonas Agassiz

C. globosa Snow - x -

C. metapyrenigera Skuja - x -

C. orbicularis Pringsh. - x -

C. pertusa Chod. - x -

Chlamydomonas sp. - x -

Chloromonas Gobi

C. tapeta (Skuja) Gerl. & Ettl - x -

Collodictyon Cart.

C. triciliatum Cart. - x -

Eudorina Ehr.

E. elegans Ehr. x - x

Gonium O.F. Müller

G. pectorale O.F. Müll. - x -

Nephroselmis Stein

N. olivacea Stein - x -

Pandorina Bory

P. morum (O.F. Müll.) Bory x x x

Phacotus Perty

P. lenticularis (Stein) Ehr. - x -

Scourfieldia West

S. chlorolateralis Calj. - x -

S. cordiformis Takeda - x -

Spermatozopsis Kors.

S. exultans Kors. - x -

Volvox L.

V. aureus Ehr. x - -

V. globator L. x - -

TETRASPORALES**Gloeochaete** Lagerh.

G. wittrockiana Lagerh. x - x

Gloeocystis Näg.

G. gigas (Kütz.) Lagerh. - - x

G. ikapoeae Schmidle - - x

Sphinctosiphon G.S. West

S. polymorphus G.S. West - - x

CHLOROCOCCALES**Actinastrum** Lagerh.

A. raphidioides (Reinsch)

Brunnth.* - x -

Ankistrodesmus Corda

A. bibraianus (Reinsch) Kors.* - - x

A. falcatus (Corda) Ralfs*

var. duplex (Kütz.) G.S. West - - x

var. falcatus x x x

var. mirabilis West & West** - - x

var. radiatus (Chod.) Lemm.* - - x

A. gracilis (Reinsch) Kors.* - x x

A. spiralis (Turn.) Lemm.* - - x

Ankyra Fott

A. judayi (Smith) Fott - x -

Botryococcus Kütz.

B. braunii Kütz.* x x x

Characium Braun

<i>C. cerasiforme</i> Eichler & Racib.	x	-	-
<i>C. longipes</i> Rabh.	-	-	x
<i>C. ornithocephalum</i> A. Br.			
var. <i>pringsheimii</i> (A. Br.) Kom.*	-	-	x
<i>C. pseudopyriforme</i> Phil.*	x	-	-
<i>C. subulatum</i> A. Br.	x	-	-

Chlorella Beij.

<i>C. minutissima</i> Fott & Novak.	-	x	-
<i>C. vulgaris</i> Beij.	-	x	-
<i>Chlorella</i> sp.	-	x	-

Chlorolobion Kors.

<i>C. braunii</i> (Näg.) Kom.*	-	-	x
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Closteriopsis Lemm.

<i>C. acicularis</i> (G.M. Smith) Belch. & Swale	-	x	-
<i>C. longissima</i> (Lemm.) Lemm.*	x	-	x

Coccomyxa Schmidle

<i>Coccomyxa</i> sp.	-	x	-
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Coelastrum Näg.

<i>C. cambricum</i> Arch.			
var. <i>cambricum</i>	x	x	x
var. <i>intermedium</i> (Bohl.) G.S. West	x	-	x
var. <i>rugosum</i> Rich	-	-	x
var. <i>stuhlmanii</i> (Schmidle) Ostenf.	-	-	x
<i>C. compositum</i> G.S. West	-	-	x
<i>C. cruciatum</i> Schmidle	-	x	-
<i>C. indicum</i> Turn.*	-	-	x
<i>C. microporum</i> Näg.	x	x	x
<i>C. morus</i> West & West	-	-	x
<i>C. proboscideum</i> Bohl. in Wittr. & Nordst.	-	-	x
var. <i>rugulosum</i> Kom.	-	-	x
<i>C. pulchrum</i> Schmidle			
var. <i>pulchrum</i>	-	-	x
var. <i>nasutum</i> Schmidle**	-	-	x
<i>C. reticulatum</i> (Dang.) Senn	x	x	x
<i>C. sphaericum</i> Näg.*	x	-	x
<i>C. stuhlmanii</i> Schmidle	-	-	x

Coenocystis Kors.

<i>C. subcylindrica</i> Kors.	-	x	-
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Crucigenia Morr.

<i>C. quadrata</i> Morr.	-	x	-
<i>C. tetrapedia</i> (Kirchn.) West & West	-	x	-
<i>Crucigenia</i> sp.	-	x	-

Crucigeniella Gaillon

<i>C. africana</i> (Wolosz.) Fott*	-	-	x
<i>C. apiculata</i> (Lemm.) Kom.*	-	x	-
<i>C. rectangularis</i> (Näg.) Kom.*	x	-	-

Desmatractum West & West

<i>D. nyanzae</i> (Wolosz.) G.S. West**	-	-	x
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Dictyochlorella Silva

<i>D. globosa</i> Silva	-	x	-
<i>D. reniformis</i> (Kors.) Silva	-	x	-

Dictyosphaerium Näg.

<i>D. ehrenbergianum</i> Näg.	-	x	x
<i>D. elongatum</i> Hind.	-	x	-
<i>D. pulchellum</i> Wood			
var. <i>pulchellum</i>	x	x	x
var. <i>minimum</i> Bachm.	-	-	x
<i>D. subsolitarum</i> Van Goor*	-	x	x
<i>D. tetrachotomum</i> Printz.	-	x	-

Dimorphococcus Braun

<i>D. lunatus</i> A. Br.*	x	x	x
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Dispora Printz

<i>D. cuneiformis</i> (Schmidle) Printz*	x	-	-
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Eutetramorus Walton

<i>E. fottii</i> (Hind.) Kom.	-	x	-
<i>E. planctonicus</i> (Kors.) Bourr.	-	x	-

Franceia Lemm.

<i>F. armata</i> (Lemm.) Kors.*	-	-	x
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Glaucocystis Itzigs.

<i>G. nostochinearum</i> Itzigs.			
var. <i>nostochinearum</i>	x	-	-
var. <i>immanis</i> Schmidle	x	-	-

Kirchhieniella Schmidle

<i>K. contorta</i> (Schmidle) Bohl.	-	-	x
<i>K. irregularis</i> (G.M. Smith) Kors.	-	x	-

<i>K. lunaris</i> (Kirchn.) Moeb.	x - x
<i>K. lunata</i> Schmidle**	x - -
<i>K. obesa</i> (W. West) Schmidle	x x x
var. <i>aperta</i> (Teil.) Brunth	- - x

Komarekia Fott

[<i>K. africana</i> (Wolosz.)]**	- - x
<i>K. appendiculata</i> (Chod.) Fott	- x -

Lagerheimia (De Toni) Chod.

<i>L. cingula</i> G.M. Smith*	- x -
<i>L. citriformis</i> (Snow) Collins	- - x
<i>L. genevensis</i> (Chod.) Chod.*	x x -
<i>L. longiseta</i> (Lemm.) Wille*	- x x
<i>L. quadriseta</i> (Lemm.) G.M. Smith	- x -
<i>L. subsalsa</i> Lemm.**	
[var. <i>citriformis</i> (Wolosz.)]**	- - x
var. <i>subsalsa</i>	- x x

Lobocystis Thompson

<i>L. dichotoma</i> Thompson	
var. <i>mucosa</i> Bourr.	- x -
<i>L. planctonica</i> (Tiff. & Ahlstr.) Fott	- x -

Micractinium Fresenius

<i>M. quadrisetum</i> (Lemm.)	
G.M. Smith*	- x -

Monoraphidium Kom.-Legn.

<i>M. circinale</i> (Nyg.) Nyg.	- x -
<i>M. contortum</i> (Thur.) Kom.-Legn.*	- x x
<i>M. convolutum</i> (Corda) Kom.-Legn.	- x -
<i>M. griffithii</i> (Berk.) Kom.-Legn.*	x x -
<i>M. komarkovae</i> Nyg.*	- x -
<i>M. minutum</i> (Nyg.) Kom.-Legn.	- x -
<i>M. mirabile</i> (West & West) Pank.	- x -
<i>M. pusillum</i> (Printz) Kom.-Legn.	- x -
<i>Monoraphidium</i> sp.	- x -

Nephrocystium Näg.

<i>N. agardhianum</i> Näg.	x x -
<i>N. limneticum</i> (Smith) Smith	- x -
<i>N. lunatum</i> W. West	- x -
<i>N. rehmanii</i> (Wolosz.) Fott*	- x x

Oocystis Näg. ex Braun

<i>O. borgei</i> Snow	- - x
<i>O. elliptica</i> W. West	- x -

<i>O. lacustris</i> Chod.	x x x
<i>O. naegeli</i> A. Br.	x - -
<i>O. novae-semiliae</i> Wille	x - -
<i>O. parva</i> West & West	x x -
<i>O. pusilla</i> Hansg.	- x x
<i>O. solitaria</i> Wittr.	x - x

Pachycladella Silva

<i>Pachycladella</i> sp.	- x -
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Palmophyllum Kütz.

<i>P. foliaceum</i> G.S. West	- x -
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Pediastrum Meyen

<i>P. angulosum</i> Ehr. ex Menegh.*	- - x
<i>P. argentiniense</i> Bourr. & Tell*	- - x
<i>P. boryanum</i> (Turp.) Menegh.*	
var. <i>boryanum</i>	x x x
var. <i>brevicorne</i> A. Br.*	x - x
var. <i>longicorne</i> Reinsch*	- - x
<i>P. coelastroides</i> Wolosz.	- - x
<i>P. duplex</i> Meyen	
var. <i>asperum</i> (A. Br.) Hansg.	- - x
var. <i>cohaerens</i> Bohl.*	- - x
var. <i>duplex</i> *	x x x
<i>P. integrum</i> Näg.	- x -
<i>P. simplex</i> Meyen*	
var. <i>simplex</i> *	x x x
var. <i>annulatum</i> Chod.**	- - x
var. <i>clathratum</i> (Schröt.) Chod.*	x - x
var. <i>duodenarium</i> (Bail.) Rabh.**	- - x
[var. <i>mirabile</i> (Wolosz.)]**	- - x
var. <i>radians</i> Lemm.**	- - x
f. <i>contortum</i> Wolosz.**	- - x
var. <i>sturmii</i> (Reinsch) Wolle*	x - x
<i>P. sorastroides</i> Wolosz.	- - x
<i>P. tetras</i> (Ehr.) Ralfs	
var. <i>tetras</i>	x x x
var. <i>longicorne</i> Racib.	x - -
var. <i>perforatum</i> Wolosz.**	- - x
<i>P. westii</i> Wolosz.**	- - x

Planktosphaeria G.M. Smith

<i>P. gelatinosa</i> G.M. Smith	- x -
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Quadricoccus Fott

<i>Q. ellipticus</i> Hortob.	- x -
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Quadrigula Printz

Q. lacustris (Chod.) G.M. Smith* - - x

Rayssiella Edelstein et Prescott

R. curvata (Bohl.) Kom.* x x x

Scenedesmus Meyen

S. aculeolatus Reinsch* x x -

S. acuminatus (Lagerh.) Chod.* - - x

S. acutiformis Schröd.
var. acutiformis x - -

S. acuminatus (Lagerh.) Chod.* - - x

S. acutus Meyen - x -

S. alternans Reinsch* x - x

S. arcuatus (Lemm.) Lemm.
var. arcuatus - x x

var. platydiscus Smith* - x -

S. armatus (Chod.) Chod. - - x

S. brasiliensis Bohl.* x x -

S. caudato-aculeolatus Chod. - x -

S. denticulatus Lagerh. - x x

S. dimorphus (Turp.) Kütz. - x -

S. disciformis (Chod.) Fott. &
Kom.* x - -

S. dispar Bréb. - x -

S. eornis (Ehr. ex Ralfs) Chod. - x -

S. ellipticus Corda - x -

S. gutwinskii Chod.
var. heterospina Bodr. - x -

S. heteracanthus Gonz. Guerr. - x -

S. hystrix Lagerh. - - x

S. incrassatulus Bohl. - - x

S. intermedius Chod.
var. intermedius - x -

var. acaudatus Hortob. - x -

var. balatonicus Hortob. - x -

S. longispina Chod. - - x

S. magnus Meyen*
var. magnus - x x

[var. arcuatus (Vir.)]** - - x

S. obliquus (Turp.) Kütz.* x x x

S. obtusus Meyen* - x x

S. opoliensis Richt.*
var. mononensis Chod. x x x

var. opoliensis - x -

S. perforatus Lemm.* - - x

S. protuberans Fritsch & Rich - x

S. quadricauda (Turp.) Bréb.

sensu Chod.** x x x

S. quadrispina Chod. - x -

S. raciborskii Wolosz. - - x

S. semipulcher Hortob. - x -

S. woloszynskae Chod.* - - x

Schmidleia Wolosz.

S. elegans Wolosz.

var. elegans - - x

var. simplex Wolosz. - - x

Schroederia Lemm.

S. nitzschoides (West) Kors.* - x -

S. setigera (Schröd.) Lemm.* - x x

Schroederiella Wolosz.

S. africana Wolosz. - - x

Siderocelis (Naum.) Fott

S. kolkwitzii (Naum.) Fott - x -

Sorastrum Kütz.

S. americanum (Bohl.) Schmidle - - x

S. hathoris (Cohn) Schmidle* x - x

S. spinulosum Näg.
var. spinulosum - x -**Sphaerocystis** Chod.

S. schroeteri Chod.** - x x

Tetradesmus G.M. SmithT. wisconsinensis G.M. Smith
f. ostenfeldii (Wolosz.)
Fott & Kom.* - - x**Tetraedron** Kütz.**T. arthrodesmiforme (G.S. West)
Wolosz.

var. arthrodesmiforme - - x

var. contortum Wolosz. - - x

var. elongatum Wolosz. - - x

var. irregulare Wolosz. - - x

var. lobulatum Wolosz. - - x

f. pentagonum Schröd. - - x

f. trigonum Schröd. - - x

T. armatum (Reinsch) De Toni - x -

T. bifurcatum (Wille) Lagerh. - x x

<i>T. caudatum</i> (Corda) Hansg.	- x -
<i>T. incus</i> (Teil.) G.M. Smith*	- x -
<i>T. inflatum</i> Wolosz.	- - x
<i>T. minimum</i> (A. Br.) Hansg.	
var. <i>minimum</i> *	x x x
f. <i>apiculatum</i> Reinsch	- x -
<i>T. paradoxum</i> Wolosz.	- - x
<i>T. pentaedricum</i> West & West	- - x
<i>T. regulare</i> Kütz.*	x - x
<i>T. raphidioides</i> (Reinsch) Hansg.	- x -
<i>T. tetragonum</i> (Näg.) Hansg.	- - x
<i>T. trigonum</i> (Näg.) Hansg.	
sensu Skuja	
var. <i>trigonum</i> *	- - x
f. <i>crassum</i> Reinsch	- - x
var. <i>gracile</i> (Reinsch) De Toni	- x -
var. <i>papilliferum</i> (Schröd.) Lemm.	- - x
var. <i>punctatum</i> Kirchn.	- - x
var. <i>tetragonum</i> Wolosz.	- - x
<i>T. victoriae</i> Wolosz.	- - x
<i>Tetraedron</i> sp.	x x x

Tetrastrum Chod.

<i>T. glabrum</i> (Roll) Ahlstr. & Tiff.	- x -
<i>T. heteracanthum</i> (Nordst.) Chod.*	- - x
<i>T. staurogeniaeforme</i> (Schröd.)	
Lemm.*	- x -

Treubaria Bern.

<i>T. setigera</i> (Arch.) G.M. Smith	- x -
<i>T. triappendiculata</i> Bern.	- x -

Trochiscia Kütz.

<i>T. aciculifera</i> (Lagerh.) Hansg.	x - -
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Westella De Wild.

<i>W. botryoides</i> (W. West) De Wild.*	- x -
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Willea Schmidle

<i>W. irregularis</i> (Wille) Schmidle*	- x -
<i>W. wilhelmii</i> (Fott) Kom.	- x -

ULOTRICHALES**Elakotothrix** Wille

<i>E. gelatinosa</i> Wille*	- - x
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Klebsormidium Silva

<i>K. subtile</i> (Kütz.) Tranc. ex Tell*	- - x
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Koliella Hind.

<i>K. setiformis</i> (Nyg.) Nyg.*	- - x
<i>K. spiculiformis</i> (Visch.) Hind.	- x -

Planctonema Schmidle

<i>P. lauterbornii</i> Schmidle	- x -
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Stichococcus Näg.

<i>S. cf. minutissimus</i> Skuja	- x -
<i>Stichococcus</i> sp.	- x -

Ulothrix Kütz.

<i>U. tenerrima</i> (Kütz.) Kütz.	- x -
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Uronema Lagerh.

<i>U. confervicola</i> Lagerh.	- x x
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CHAETOPHORALES**Chaetophora** Schrank

<i>C. elegans</i> (Roth) Ag.	- x -
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CLADOPHORALES**Cladophora** Kütz.

<i>C. brachystelecha</i> Rabh.	- x -
<i>C. canalicularis</i> (Roth) Kütz.	x x -
<i>C. crispata</i> (Roth) Kütz.	x x x
<i>C. fracta</i> (Kütz.) Brand	x x -
<i>C. inconspicua</i> G.S. West	- x -

OEDOGONIALES**Bulbochaete** Ag. ex Him

<i>B. elatior</i> Pringsh. ex Him	x x -
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Oedogonium Link ex Him

<i>O. cryptoporum</i> Wittr. ex Him	x - -
<i>O. dictyosporum</i> Wittr. ex Him	- x -
<i>O. himii</i> Gutw. ex Him	- x -

<i>O. kitutae</i> G.S. West	- x -
<i>O. kurzii</i> Zeller & Him	x - -
<i>O. patulum</i> Tiff.*	- x -
<i>Oedogonium</i> sp.	- x -

DESMIDIALES

Actinotaenium (Näg.) Teil.

<i>A. australe</i> (Racib.) Croasd.*	- - x
<i>A. diplosporium</i> (Lund.) Teil.	
<i>f. maius</i> (W. West) Teil.	- - x
<i>A. globosum</i> (Bulnh.) Förster*	
<i>var. globosum</i>	- x x
<i>var. minus</i> (Boldt)	- - x
<i>A. lagenarioides</i> (Roy) Teil.	- x -
<i>A. sidneyense</i> (Racib.) Teil.	- x -
<i>A. wollei</i> (West & West)	
Teil. ex Ruzick. & Pouz.*	- x x

Closterium Nitzsch ex Ralfs

<i>C. abruptum</i> W. West	
<i>f. angustissimum</i> Schmidle	x - x
<i>C. acerosum</i> (Schrank) Ehr. ex Ralfs	x x x
<i>C. aciculare</i> T. West	
<i>var. aciculare</i>	x - x
<i>var. subprorum</i> West & West	- - x
<i>C. acutum</i> (Lyng.) Bréb. ex Ralfs	
<i>var. acutum</i>	x x -
<i>var. tenuius</i> Nordst.	- x -
<i>C. diana</i> Ehr. ex Ralfs	x - -
<i>C. gracile</i> Bréb.	
<i>var. gracile</i>	- x x
<i>var. tenue</i> (Lemm.) West & West	- - x
<i>C. jenneri</i> Ralfs*	x - x
<i>C. kuetzingii</i> Bréb.	
<i>var. kuetzingii</i>	x - x
<i>var. capense</i> Nordst.	x - -
<i>var. laeve</i> (Racib.) Krieg.*	- - x
<i>C. lagoense</i> Nordst.	- x -
<i>C. lanceolatum</i> Kütz. ex Ralfs	
<i>var. lanceolatum</i>	- - x
<i>var. parvum</i> West & West	- - x
<i>C. leibleinii</i> Kütz. ex Ralfs	x x x
<i>C. limneticum</i> Lemm.	- x -
<i>C. lineatum</i> Ralfs	x - -

C. moniliferum (Bory) Ehr. ex Ralfs

<i>var. moniliferum</i> *	x - x
<i>f. brevius</i> Schröd.	- - x
<i>C. navicula</i> (Bréb.) Lütke.*	- - x
<i>C. nematodes</i> Josh.	
<i>var. tumidum</i> G.S. West	- - x
<i>C. parvulum</i> Næg.	x - -
<i>C. praelongum</i> Bréb.	
<i>var. crassius</i> Schmidle**	x - -
<i>C. ralfsii</i> Bréb. ex Ralfs	
<i>var. hybridum</i> Rabh.	- - x
<i>var. ralfsii</i>	- - x
<i>C. strigosum</i> Bréb.	- x -
<i>C. striolatum</i> Ehr. ex Ralfs	x - -
<i>C. tumidum</i> Johnson	- - x
<i>C. venus</i> Kütz. ex Ralfs	x x x

Cosmarium Corda ex Ralfs

<i>C. abruptum</i> Lund.	
<i>var. granulatum</i> West & West	- - x
<i>C. angulosum</i> Bréb.	
<i>var. angulosum</i>	x x x
<i>var. concinnum</i> (Rabh.) West & West	- x x
<i>C. binum</i> Nordst.	x x x
<i>C. bioculatum</i> Bréb. ex Ralfs	x - x
<i>C. blyttii</i> Wille	x x x
<i>C. capense</i> (Nordst.) De Toni	x - -
<i>C. connatum</i> (Bréb.) Ralfs	x - x
<i>C. contractum</i> Kirchn.*	
<i>var. contractum</i>	- - x
<i>var. ellipsoideum</i> (Elfv.) West & West	- - x
<i>C. creperum</i> West & West	- - x
<i>C. cunningtonii</i> G. S. West	- - x
<i>C. decachondrum</i> Roy & Biss.	
<i>var. ornatum</i> G.S. West	- - x
<i>C. depressum</i> (Næg.) Lund.	
<i>var. depressum</i>	- x x
<i>var. achondrum</i> (Boldt) West & West	- - x
<i>C. elaboratum</i> West & West	x - -
<i>C. fontigenum</i> Nordst.	x - -
<i>C. fullebornei</i> Schmidle	x - -

<i>C. galeritum</i> Nordst.		<i>C. scabratum</i> West & West	- x x
var. <i>galeritum</i>	x - x	<i>C. sexangulare</i> Lund.	
var. <i>muelleri</i> (Schmidle)		var. <i>sexangulare</i>	x - -
Krieg. & Gerl.*	x - -	var. <i>minus</i> Roy & Biss.	x x -
var. <i>retusum</i> G.S. West	x - x	<i>C. subauriculatum</i> West & West	x - x
<i>C. glyptodermum</i> West & West	- x -	<i>C. subconstrictum</i> Schmidle	- - x
<i>C. granatum</i> Bréb. ex Ralfs	x - x	<i>C. subcostatum</i> Nordst.	
<i>C. hammeri</i> Reinsch		f. <i>minus</i> West & West	x - -
var. <i>hammeri</i>	- - x	<i>C. subcucumis</i> Schmidle	- - x
var. <i>schmidlei</i> Grönb. & Scott*	x - -	<i>C. subdanicum</i> West	- - x
<i>C. impressulum</i> Elfv.*	x - x	<i>C. subprotumidum</i> Nordst.	x x -
<i>C. lacunatum</i> G.S. West	x - -	<i>C. subpyramidatum</i> (West & West)	
<i>C. laeve</i> Rabh.		Lütke.*	- x x
var. <i>laeve</i>	x - x	<i>C. subspeciosum</i> Nordst.	- x -
var. <i>minimum</i> West & West	x - -	<i>C. symoënsii</i> Van Oye**	- x -
<i>C. lindau</i> Schmidle	x - -	<i>C. trilobulatum</i> Reinsch	
<i>C. lundellii</i> Delp.		var. <i>trilobulatum</i>	x - -
var. <i>lundellii</i>	x - -	var. <i>abscissum</i> (Schmidle)	
var. <i>madagascariensis</i> West & West	x - -	Krieg. & Gerl.*	- - x
<i>C. margaritatum</i> (Lund.)		<i>C. welheimii</i> Schmidle	x - -
Roy & Biss.	x x -	<i>C. zonarium</i> West & West	- x -
<i>C. margaritifera</i> (Turp.) Ralfs	x - -	Cylindrocystis Menegh. ex	
<i>C. meneghinii</i> Bréb. ex Ralfs*	x - x	De Bary	
<i>C. minimum</i> West & West	- x -	<i>C. brebissonii</i> (Menegh. ex Ralfs)	
<i>C. minutissimum</i> Arch.	- - x	De Bary	
<i>C. minutum</i> Delp.*	- - x	var. <i>brebissonii</i>	- x -
<i>C. moniliforme</i> (Turp.) Ralfs*	- - x	var. <i>curvata</i> Rabanus	
<i>C. multiordinatum</i> West & West	- - x	f. <i>quadripyrenoidea</i> Van Oye	- x -
<i>C. nitidulum</i> De Not.	- x -	<i>C. crassa</i> De Bary	- x -
<i>C. notabile</i> De Bary	- - x		
<i>C. nymmannianum</i> Grun.		Euastrum Ehr. ex Ralfs	
var. <i>abyssinicum</i> (Lagerh.)		<i>E. ansatum</i> Ralfs	- - x
Krieg. & Gerl.*	x x -	<i>E. binale</i> Ralfs	
<i>C. obsoletum</i> (Hantzsch) Reinsch	x x x	var. <i>hians</i> W. West	x - -
<i>C. occultum</i> Schmidle	x - -	<i>E. denticulatum</i> (Kirchn.) Gay	- x -
<i>C. phaseolus</i> Bréb.	x - -	<i>E. elegans</i> Ralfs	- - x
<i>C. planum</i> West & West	x - -	<i>E. elobatum</i> (Lund.) Roy & Biss.*	x - -
<i>C. praemorsum</i> Bréb.	- - x	<i>E. engleri</i> Schmidle	
<i>C. pseudamoenum</i> Wille	- x -	var. <i>engleri</i>	- - x
<i>C. pseudobroomei</i> Wolle		var. <i>victoriae</i> Wolosz.	- - x
var. <i>pseudobroomei</i>	x x -	var. <i>woloszynskae</i> Krieg.	- - x
var. <i>compressum</i> G.S. West	- x -	<i>E. glaziovii</i> Börg.	
var. <i>madagascariensis</i> West & West	x - -	var. <i>glaziovii</i>	- - x
<i>C. pseudopyramidatum</i> Lund.	- - x	var. <i>evolutum</i> (Nordst.) Compère*	- - x
<i>C. quadrum</i> Lund.	x - x	f. <i>simplex</i> Compère	- - x
<i>C. regnesi</i> Reinsch	- x -	<i>E. hypochondroides</i> West & West	
<i>C. retusifera</i> (Wille) Gutw.	x - x	var. <i>hypochondroides</i>	- - x

<i>E. oculatum</i> Börg.	- x -
<i>E. personatum</i> West & West	x - -
<i>E. pseudopectinatum</i> Schmidle	- x -
<i>E. rostratum</i> Ralfs**	- - x
<i>E. sinuosum</i> Lenorm.	
<i>E. spinulosum</i> Delp.	
var. <i>inermius</i> Nordst.	x x -
var. <i>spinulosum</i> *	x - x
<i>E. substellatum</i> Nordst.	
var. <i>wembaerense</i> Schmidle	x - x
<i>E. truncatiforme</i> G. S. West*	x - x
<i>E. turneri</i> West	x - -

Gonatozygon De Bary

<i>G. kinahanii</i> (Arch.) Rabh.	- - x
<i>G. monotaenium</i> De Bary	- x x

Hyalotheca Ehr. ex Ralfs

<i>H. dissiliens</i> (Smith) Bréb. ex Ralfs	x - -
<i>H. mucosa</i> (Mert.) Ehr. ex Ralfs	
var. <i>mucosa</i>	- x -

Mesotaenium Näg.

<i>M. chlamydosporum</i> De Bary	- x -
<i>M. degreyi</i> Turn.	
var. <i>degrei</i>	- x -
var. <i>breve</i> W. West	- x -
<i>M. endlicherianum</i> Näg.	
var. <i>endlicherianum</i>	- x -
var. <i>grande</i> Nordst.	- x -
<i>M. macrococcum</i> (Kütz.)	
Roy & Biss.	- x -

Micrasterias Ag. ex Ralfs

<i>M. americana</i> (Ehr.) Ralfs	- x x
<i>M. crux-melitensis</i> (Ehr.) Ralfs	x - -
<i>M. cunningtonii</i> G.S. West**	- - x
<i>M. divisa</i> Krieg.	x - -
<i>M. pinnatifida</i> (Kütz.) Ralfs	
var. <i>divisa</i> West f. <i>major</i>	
Schmidle	x - -
<i>M. tropica</i> Nordst.	
var. <i>elegans</i> West & West	x - -
<i>M. zeylanica</i> Fritsch*	x x -

Netrium (Näg.) Itzigs. & Rothe

<i>N. digitus</i> (Bréb. ex Ralfs)	
Itzigs. & Rothe	- x x

Penium Bréb. ex Ralfs

<i>P. didymocarpum</i> Lund.*	x - -
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Pleurotaenium Näg.

<i>P. caldense</i> Nordst.*	x x -
<i>P. coronatum</i> (Bréb.) Rabh.	- x -
<i>P. cylindricum</i> (Turn.) Schmidle	x - -
<i>P. ehrenbergii</i> (Bréb.) De Bary	x - x
<i>P. elatum</i> (Turn.) Borge	
var. <i>elatum</i>	- x -
<i>P. eugeneum</i> (Turn.) West & West	
var. <i>africanum</i> (G.S. West)	
Krieg.*	x - -
<i>P. maximum</i> (Reinsch) Lund.	- x x
<i>P. subcoronulatum</i> (Turn.)	
West & West	
var. <i>subcoronulatum</i>	- - x
var. <i>africanum</i> (Schmidle) Krieg.*	x - -
var. <i>detum</i> West & West	- - x
<i>P. trabecula</i> (Ehr.) Näg.	- x x

Roya West & West

<i>R. obtusa</i> (Bréb.) West & West	- x -
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Spondylosium Bréb. ex Kütz.

<i>S. papillosum</i> West & West*	x - -
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Staurostrum Meyen ex Ralfs

<i>S. alternans</i> Bréb. ex Ralfs	- x -
<i>S. americanum</i> (West & West)	
G.M. Smith	
var. <i>americanum</i>	- - x
var. <i>longiradiatum</i> G.M. Smith	- - x
<i>S. anatinum</i> Cooke & Wills	
var. <i>anatinum</i>	- - x
var. <i>subglabrum</i> G.S. West	- - x
<i>S. brebissonii</i> Arch.*	- - x
<i>S. coarctatum</i> Bréb.	
var. <i>subcurtum</i> Nordst.	- - x
<i>S. cunningtonii</i> G.S. West	- x -
<i>S. denticulatum</i> (Näg.) Arch.	- - x
<i>S. disputatum</i> West & West	
var. <i>disputatum</i>	- - x
<i>S. echinatum</i> Bréb.	- - x
<i>S. engleri</i> Schmidle	- - x
<i>S. erostellum</i> West & West	- - x

<i>S. excavatum</i> West & West		<i>S. sinense</i> Lütkem.*	- - x
var. <i>excavatum</i>	- - x	<i>S. subgemmulatum</i> West & West	- - x
var. <i>minimum</i> Bern.	- - x	<i>S. subgracillimum</i> West & West	- - x
var. <i>planctonicum</i> Krieg.	- - x	<i>S. submanfeldtii</i> West & West	x - x
<i>S. fuellebornii</i> Schmidle	x - -	<i>S. subprotractum</i> Schmidle	x - -
<i>S. gracile</i> Ralfs		<i>S. subtrifurcatum</i> West & West	
var. <i>gracile</i>	- - x	var. <i>subtrifurcatum</i>	- - x
var. <i>nyansae</i> G.S. West	- - x	f. <i>bidens</i> Schmidle	x - x
var. <i>protractum</i> G.S. West	x - x	<i>S. tetracerum</i> Kütz. ex Ralfs	- x x
var. <i>subornatum</i> Schmidle	- - x	<i>S. tohopekaligense</i> Wolle	
<i>S. gladiosum</i> Turn.	- - x	var. <i>tohopekaligense</i>	- - x
<i>S. gracillimum</i> West & West	- - x	f. <i>triangulare</i> G.S. West	- - x
<i>S. leptocladum</i> Nordst.		var. <i>nonanum</i> (Turn.) Schmidle	- - x
var. <i>cornutum</i> Wille	- - x	var. <i>quadrangulare</i> G.S. West**	- - x
var. <i>leptocladum</i>	x - x	var. <i>trifurcatum</i> West & West	x - -
f. <i>africanum</i> G.S. West	x - x	<i>S. turgescens</i> De Not.	
<i>S. limneticum</i> Schmidle		var. <i>turgescens</i>	x - -
var. <i>limneticum</i>	- - x	f. <i>minus</i> G.S. West	x - -
var. <i>aculeatum</i> Lemm.	- - x	<i>S. ukerewense</i> Thom.	- - x
var. <i>groenbladii</i> Croasd.	- - x	<i>S. volans</i> West & West	- - x
f. <i>victoriense</i> Croasd.	- - x		
<i>S. lindae</i> Grönb.	- - x	Staurodesmus Teiling	
<i>S. longiradiatum</i> West & West	- - x	<i>S. brevispina</i> (Bréb. ex Ralfs)	
<i>S. margaritaceum</i> Ehr. ex Ralfs	- x -	Croasd.*	
<i>S. monticulosum</i> Bréb.	- - x	var. <i>brevispina</i>	- - x
<i>S. mutabile</i> Turn.	- x -	fac.2 <i>fuellebornii</i> Teil.*	x - x
<i>S. muticum</i> Bréb. ex Ralfs	- - x	<i>S. convergens</i> (Ehr.) Teil.	
<i>S. orbiculare</i> Ehr. ex Ralfs		var. <i>convergens</i>	- x x
var. <i>depressum</i> Roy & Biss.	- x x	<i>laportei</i> Teil.*	- - x
<i>S. paradoxum</i> Meyen ex Ralfs**		<i>S. corniculatus</i> (Lund.) Teil.*	- - x
var. <i>paradoxum</i>	- - x	<i>S. cuspidatus</i> (Bréb. ex Relfs)	
var. <i>parvum</i> W. West	- - x	Teil.*	- - x
<i>S. pilosum</i> (Näg.) Arch.		<i>S. dejectus</i> (Bréb. ex Ralfs) Teil.*	- - x
var. <i>minimum</i> G.S. West	- - x	<i>S. dickiei</i> (Ralfs) Lill. *	
<i>S. planctonicum</i> Teil.		var. <i>dickiei</i>	- - x
var. <i>bulbosum</i> (West) Thom.	- - x	var. <i>circularis</i> (Turn.) Croasd.*	x - -
<i>S. polymorphum</i> Bréb.	- - x	<i>S. glaber</i> (Ehr.) Teil.	
<i>S. pseudotetracerum</i> (Nordst.)		var. <i>limnophilus</i> Teil.*	- - x
West & West	- - x	<i>S. incus</i> (Bréb. ex Ralfs) Teil. *	
<i>S. punctulatum</i> Bréb. ex Ralfs	- - x	var. <i>incus</i> *	- - x
<i>S. quadrangulare</i> Bréb. ex Ralfs		var. <i>ralfsii</i> (W. West) Teil.*	- - x
var. <i>attenuatum</i> Nordst.	- x -	<i>S. jaculiferus</i> (W. West) Teil. *	- - x
<i>S. sebaldi</i> Reinsch		<i>S. sellatus</i> Teil.	- - x
var. <i>ornatum</i> Nordst.		<i>S. subtriangularis</i> (Borge) Teil.*	- - x
f. <i>planctonicum</i> (Lütkem.) Teil.	- - x	<i>S. subulatus</i> (Kütz.) Thom.	
<i>S. setigerum</i> Cleve		var. <i>subaequalis</i>	
var. <i>setigerum</i>	- - x	(G.S. West)*	x - x
var. <i>nyansae</i> Schmidle	- - x	<i>S. triangularis</i> (Lagerh.) Teil.*	- - x
var. <i>occidentale</i> West & West	- - x		

Teilingia Bourr.

T. excavata (Ralfs) Bourr.* x - -

Tetmemorus Ralfs

T. laevis (Kütz.) Ralfs - x -

Xanthidium Ehr. ex Ralfs

X. antilopaeum Bréb. ex Kütz. - - x

X. cristatum Bréb. ex Ralfs x - -

ZYGNEMATALES**Debarya** Wittr.

D. africana G.S. West x - -

Mougeotia Ag.

M. planctonica Vir. - - x

Mougeotia sp. x x -

Spirogyra Link

S. aequinoctialis G.S. West x - -

S. bellis (Hass.) Cleve
var. *minor* G.S. West - x -

S. columbiana Czurda* x x -

S. decimina (O.F. Müll.) Kütz.
var. *decimina* x - -

S. neglecta (Hass.) Kütz.
var. *temata* (Ripert)
West & West - x -

S. nitida (Dillw.) Link x - -

S. pellida Dickie x - -

S. porticalis (O.F. Müll.) Cleve
var. *africana* G.S. West x - -

Spirogyra sp. - x -

SIPHONOCCLADALES**Chaetomorpha** Kütz.

C. linum Kütz. - x -

Stigeoclonum Kütz.

S. nanum Kütz. - x -

CHARALES**Chara** L.

C. setosa Klein ex Willd.*

f. *setosa* x x -

f. *tanganyikae* (R.D. W.)
R.D. W.* - x -

C. vulgaris L.

f. *gymnophylla* (A.Br.) R.D. W.* - x -

C. zeylanica Klein ex Willd. - x -

Nitella Ag.

N. mucronata (A. Br.) Miq.* - x -

EUGLENOPHYTA**Astasia** Ehr.

A. quartana (Morr.) Pringsh. - x -

Colacium Ehr.

C. simplex Hub.-Pest. - x -

Euglena Ehr.

E. acus Ehr. - x -

E. agilis Cart. - x -

E. caudata Hub.-Pest.
var. *minor* Defl. - x -

E. ehrenbergii Klebs - x -

E. hemichromata Skuja - x -

E. intermedia (Klebs) Schmitz - x -

E. klebsii (Lemm.) Mainx - x -

E. limnophila Lemm.

var. *minor* Drezep. - x -

E. oblonga Schmitz - x -

E. oxyuris Schmarda
f. *charkowiensis* (Swir.) Bourr.* - x -

E. proxima Dang. - x -

E. spirogyra Ehr. x - -

E. variabilis Klebs - x -

E. viridis Ehr. x x -

Euglena sp. - x -

Eutreptia Perty

Eutreptia sp. x - -

Lepocinclis Perty

L. fusiformis Lemm.	- x -
L. ovum (Ehr.) Lemm.	
var. ovum	x x -
f. inamoullata Defl.	- x -
f. mammillata Defl.	- x -
L. texta (Dujard.) Lemm.	
var. texta	- x -
var. richiana Conr.	- x -

Petalomonas Stein

Petalomonas sp.	- x -
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Phacus Nitzsch

P. acuminatus Stokes	- x -
P. agilis Skuja	- x -
P. angulatus Pochm.	- x -
P. brevicaudatus (Klebs) Lemm.	- x -
P. curvicauda Swir.	- x -
P. hamatus Pochm.	- x -
P. helicoides Pochm.	- x -
P. longicauda (Ehr.) Dujard.	x x -
P. orbicularis Hübn.	- x -
P. pleuronectes (O.F. Müll.) Dujard.	x - -
P. pusillus Lemm.	- x -
P. pyrum (Ehr.) Stein	- x -
P. skujae Skvortz.	- x -
P. suecicus Lemm.	- x -
P. tortus (Lemm.) Swir.	- x -

Strombomonas Defl.

S. acuminata (Schmarda) Defl. *	
var. acuminata	- x -
var. amphora Playf.	- x -
S. annulata (Dad.) Defl.	x - -
S. fluviatilis (Lemm.) Defl.	- x -

Trachelomonas Ehr.

T. armata (Ehr.) Stein	
var. steinii Lemm. emend. Defl.	- x -
T. bacillifera Playf.	
var. globulosa Playf.	- x -
T. curta Da Cunha	- x -
T. dubia Swir. emend Defl.	
var. colliundulata Calj.	- x -
T. gatumbana Calj.	- x -

T. hispida (Perty) Stein emend. Defl.

var. hispida	x x -
var. crenulato-collis (Mask.) Lemm.	
f. recta Defl.	- x -
var. duplex Defl.	- - x
T. klebsii Defl.	- x -
T. komarovii Skvortzov	
var. bicollaris Calj.	- x -
T. lefevrei Defl.	- x -
T. lemmermannii Wolosz.	- x -
T. ovalis Dad.	x - -
T. pulcherrima Playf.	
var. pulcherrima	- x -
var. latior Playf.	- x -
T. raciborskii Wolosz.	- - x
T. scabra Playf.	
var. scabra	- x -
var. ovata Playf.	- x -
T. stokesii Drezep. emend. Defl.	- x -
T. volvocina Ehr.	x x -
T. volvocinopsis Swir.	- x -

DINOPHYTA**Ceratium** Schrank

C. brachyceros Dad.*	- - x
C. hirundinella (O. Müll.) Dujard.*	
f. hirundinella	x - x
f. brachyceroides Schröd.	- - x

Glenodinium Ehr.

G. pulvisculus (Ehr.) Stein	
var. pulvisculus	- x -
var. depressum Vir.	- - x
G. quadridens (Stein) Schill.	x x x
Glenodinium sp.	- x -

Gymnodinium Stein

G. lantzchii Uterm.*	- x -
G. lacustre Schill.*	- x -
G. uberrimum (Allm.) Kof. & Swezy*	- x -
G. varians Mask.	- x -
Gymnodinium spp.	x x -

Peridiniopsis Lemm.

<i>P. berolinense</i> (Lemm.) Bourr.*	- x -
<i>P. cunningtonii</i> Lemm.*	- x x
<i>P. penardii</i> (Lemm.) Bourr.*	- x x

Peridinium Ehr.

<i>P. africanum</i> Lemm.	
var. <i>africanum</i>	x x -
<i>tab. remotum</i> Lef.	- x -
<i>P. bipes</i> Stein	x - -
<i>P. cinctum</i> Ehr.	- - x
<i>P. inconspicuum</i> Lemm.**	- x -
<i>P. palatinum</i> Lauterb.*	x x -
<i>P. pusillum</i> (Penn.) Lemm.**	- x -
<i>P. umbonatum</i> Stein**	- - x
<i>P. volzii</i> Lemm.**	- x -
<i>P. westii</i> Lemm.**	- - x
<i>Peridinium</i> sp.	- x -

Sphaerodinium Wolosz.

<i>S. cinctum</i> Wolosz.*	- x -
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XANTHOPHYTA**Goniochloris** Geitler

<i>G. laevis</i> Pasch.	- x -
<i>G. mutica</i> (A. Br.) Fott	- x -
<i>G. smithii</i> (Bourr.) Fott	- x -

Isthmochloron Skuja

<i>I. lobulatum</i> (Näg.) Skuja*	- - x
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Ophiocytium Näg.

<i>O. biapiculatum</i> Hieron.	x - -
<i>O. parvulum</i> (Perty) A. Br.	
var. <i>parvulum</i>	x - -
var. <i>circinatum</i> (Wolle) Lemm.	- - x

Polygoniochloris Ettl

<i>P. circularis</i> (Bourr. & Geor.) Ettl	- x -
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Pseudostaurastrum (Hansg.)

Chod.

<i>P. enorme</i> (Ralfs) Chod.*	- - x
<i>P. hastatum</i> (Reinsch) Chod.*	- - x

P. limneticum (Borge) Chod.*

var. <i>limneticum</i>	- - x
[var. <i>minimum</i> (A. Br.) Hansg.*]	- - x

CHRYSOPHYTA**Bicosoeca** Clark

<i>B. conica</i> Lemm.	- x -
<i>B. planctonica</i> Kiss.	
var. <i>planctonica</i>	- x -
var. <i>multiannulata</i> (Skuja) Bourr.	- x -
<i>Bicosoeca</i> sp.	- x -

Cercobodo Krassilstchik

<i>Cercobodo</i> sp.	- x -
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Chromulina Cienkowski

<i>Chromulina</i> sp.	- x -
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Chrysostephanosphaera

Scherff.

<i>C. globulifera</i> Scherff.	- x -
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Codonosigopsis Senn

<i>C. robini</i> Senn	- - x
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Desmarella Kent

<i>D. moniliformis</i> Kent	- x -
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Dinobryon Ehr.

<i>D. sertularia</i> Ehr.	- - x
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Erkenia Skuja

<i>E. subaequiciliata</i> Skuja	- x -
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Kephyrion Pasch.

<i>K. cupiliforme</i> Contr.	- x -
<i>K. planctonicum</i> Hill.	- x -

Mallomonas Perty

<i>M. cf. spinulosa</i> Contr.	- - x
<i>Mallomonas</i> sp.	- x -

Monosiga Kent

<i>M. robusta</i> Stokes	x -
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Ochromonas Wyssottzki

Ochromonas sp. - x -

Paraphysomonas De Saed.

P. vestita (Stokes) De Saed. - x -

Paraphysomonas sp. - x -

Salpingoeca Clark

S. elegans (Bachm.) Lemm. - x -

S. frequentissima (Zach.) Lemm. - x -

Spiniferomonas Takahashi

Spiniferomonas sp. - x -

Spumella Cienkowski

Spumella sp.* - x -

Stylopyxis Bolochozew

Stylopyxis sp. - x -

PRYMNESIOPHYTA**Chrysochromulina** Lack.

C. parva Lack. - x -

BACILLARIOPHYTA**CENTROPHYCIDAE****COSCINODISCALES****Aulacoseira** Thwaites**

A. agassizii (Ostenf.) Sim.* - - x

A. ambigua (Grun.) Sim.* x - x

A. argus (O. Müll.) Sim.*

var. *argus* x - -

[subsp. *granulosa* O. Müll.] x - -

[subsp. *trimorpha* O. Müll.] x - -

A. distans (Ehr.) Sim. - x -

A. goetzeana (O. Müll.) Sim.* x x x

A. granulata (Ehr.) Sim.*

var. *granulata* x x x

var. *angustissima* (O. Müll.)

Sim.* x x x

[var. *angustissima*

f. *curvata* Hust.] - - x

A. ikapoënsis (O. Müll.) Sim.*

var. *ikapoënsis* x - x

var. *minor* (O. Müll.) Sim.* - x -

var. *procera* (O. Müll.) Sim.* - x -

A. italica (Ehr.) Sim.*

var. *italica* - x x

var. *tenuissima* (Grun.) Sim.* x - -

[f. *angustata* O. Müll.] x - -

[var. *bacilligera* O. Müll.] x - -

[var. *plicatella* O. Müll.] x - -

A. kondeensis (O. Müll.) Sim.*

A. magnusii (O. Müll.) Sim.* - - x

A. mbasiensis (O. Müll.) Sim.* x - -

A. muzzanensis (Meister) Kram. - - x

A. nyassensis (O. Müll.) Sim.* x - x

[subsp. *bacillosa* O. Müll.] x - x

[subsp. *bacillosa*

f. *minor* O. Müll.] x - x

[subsp. *devriesii* O. Müll.] x - x

[var. *victoriae* O. Müll.] - - x

A. pfaffiana (Reinsch) Kram.* - x x

A. pyxis (O. Müll.) Sim.* x x -

Coscinodiscus Ehr.

C. limifixus Kufferath - x -

Cyclostephanos Round

C. damasii (Hust.) Stoermer
& Håkansson* x x -

C. malawiensis Casper & Klee x - -

Cyclotella Kütz.

C. distinguenda Hust.* x x x

C. krammeri Håkansson* x x x

C. meduanae Germain - x -

C. meneghiniana Kütz.* x x x

C. ocellata Pantocsek x x x

C. radiosa (Grun.) Lemm.* - - x

C. stelligera Cl. & Grun. - - x

Cyclotella sp. - x -

Melosira Ag.

M. varians Ag. - - x

Orthoseira Thwaites

O. roeseana (Rabh.) O'Meara* - x -

Skeletonema Grev.

S. potamos (Weber) Hasle* - x -

Stephanodiscus Ehr.

S. astraea (Egr.) Grun.**
var. *astraea* x x x
f. *tanganikae* Kufferath - x -
var. *intermedius* Fricke x - x
S. carconensis Grun. - x -
S. hantzschii Grun. x - -
f. *tenuis* (Hust.) Håkansson x - -
S. minutulus (Kütz.) Cl. & Möller* x x x
S. muelleri Klee & Casper x - -
S. parvus (Cl. & Möller) Stoermer
& Håkansson* x - x
Stephanodiscus sp. x x -

Thalassiosira Cl.

T. faurei (Gasse) Hasle - x -
T. rudolfi (Bachm.) Hasle - x x

RHIZOSOLENIALES

Rhizosolenia Brightwell

R. curviseta Hust.* - - x
R. eriensis H.L. Smith
f. *eriensis* - x x
f. *brevispina* Wolosz. - - x
var. *pusilla* Wolosz. x x x
R. insignis H.L. Smith - - x
R. stagnalis (Zach.) Schröder - - x
R. victoriae Schröder - - x
Rhizosolenia sp. - - x

BIDDULPHIALES

Odontella Ag.

O. aurita (Lyngb.) Ag.* x - -

PENNATOPHYCIDAE

ARAPHIDALES

Asterionella Hass.

A. formosa Hassall* - - x

Diatoma Bory

D. elongata Ag.
var. *elongata* - - x
var. *chappuisii* Bachm. - - x

Fragilaria Lyngb.

F. aethiopica G.S. West - x -
F. africana Hust. x x x
F. brevistriata Grun.
var. *brevistriata* x x x
var. *trigibba* (Pant.) Hust. - x -
F. capucina Desmazieres
var. *capucina* x - -
var. *mesolepta* Rabh. - x -
F. constricta Ehr.* x - -
F. construens (Ehr.) Grun.
var. *construens* x x x
var. *exigua* (W. Smith) Schulz* - - x
var. *javanica* Hust. - x -
var. *subsalina* Hust. - x -
var. *venter* (Ehr.) Grun. x x x
F. crotonensis Kitton - - x
F. heidenii Østrup - x -
F. hungarica Pant. - - x
F. lapponica Grun.* x - x
F. leptostauron (Grun.) Mayer
var. *leptostauron* - x x
var. *dubia* (Grun.) Hust. - x -
F. longissima Hust. - - x
F. intermedia (Grun.) Grun.* x - -
F. pinnata Ehr.*
var. *pinnata* x x x
var. *lancettula* (Schumann) Hust. - x x
var. *trigona* (Brun. & Hérib.)
Hust. - - x
F. vaucheriae (Kütz.) Boye-Pet. - - x
var. *capitellata* (Grun.) Ross* - x -
F. virescens Ralfs x x x

Meridion Ag.

M. circulare (Grev.) Ag. - x -

Opephora Petit

O. martyi Héríb. - x -

Synedra Ehr.**

S. acus Kütz. x x x

var. *acus* x x x

var. *angustissima* Grun. x x -

S. amphicephala Kütz. x - -

S. berolinensis Lemm.* - x x

S. cunningtonii G.S. West - - x

S. goulardii Bréb. - x x

S. nyansae G.S. West* x x x

S. pulchella Ralfs ex Kütz. - x x

S. radians (Kütz.) Grun.* x x x

S. rumpens Kütz. - - -

var. *rumpens* - x x

var. *fragilarioides* Grun. x x -

S. revaliensis Lemm. - x -

S. tabulata (Ag.) Kütz. - - -

var. *fasciculata* (Ag.) Hust.* - x -

var. *parva* (Kütz.) Hust*. x - -

S. ulna (Nitz.) Ehr.* x x x

var. *ulna* x x x

var. *aequalis* (Kütz.) Hust. - x -

var. *amphirhynchus* (Ehr.) Grun.* x x -

var. *biceps* (Kütz.) Schönfeldt x - -

var. *danica* (Kütz.) Grun. x x -

var. *oxyrhynchus* (Kütz.) V.H. - x -

Tabellaria Ehr.

T. fenestrata (Lyngb.) Kütz.* - - x

var. *fenestrata* - - x

var. *asterionelloides* Grun. - - x

T. flocculosa (Rabh.) Kütz. - - x

RAPHIDIOIDALES**Eunotia** Ehr.

E. arcus Ehr. x x -

E. cf. camelus Ehr. - x -

E. curvata (Kütz.) Lgst. - x -

E. didyma Grun. - - -

var. *tuberosa* Hust. - x -

E. flexuosa Bréb. ex Kütz.* x x x

var. *flexuosa* x x x

var. *eurycephala* Grun. - x -

E. glacialis Meister* - x -

E. incisa W. Smith ex Greg. - x -

E. lunaris (Ehr.) Grun.** x x x

E. microcephala Krasske* - x -

E. monodon Ehr. - x -

E. pectinalis (O.F.Mül.) Rabh. x x x

var. *pectinalis* x x x

var. *minor* (Kütz.) Rabh. - x -

var. *minor f. impressa* (Ehr.) Hust. - x -

var. *rostrata* Germain - x -

var. *undulata* (Ralfs) Rabh. x x -

var. *ventricosa* Grun. - x -

E. tridentula Ehr. x - -

E. porcellus Chol. - x -

E. rabenhorstii Cl. & Grun. - - -

var. *africana* Hust. - x -

var. *monodon* Grun. - x -

MONORAPHIDALES**Achnanthes** Bory

A. bergiana Cl. - x -

A. brevipes Ag. x - -

var. *intermedia* (Kütz.) Cl.* x - -

A. buccula Chol. - x -

A. coarctata Grun. x - -

A. congolensis Hust. - - x

A. delicatula (Kütz.) Grun. - x -

A. exigua Grun. x x -

A. hungarica (Grun.) Grun. - x -

A. inflata (Kütz.) Grun.* x x -

var. *inflata* x x -

var. *elata* (Leuduger-Fortmorel)

Hust. - x -

A. lanceolata (Bréb.) Grun.* x x -

var. *lanceolata* x x -

var. *dubia* Grun. x x -

var. *haynaldii* (Istv.-Schaarsch.)

Cl. * x - -

var. *minor* (Schulz) L.-B. - x -

var. *rostrata* (Østrup) Hust. - x -

A. linearis (W. Smith) Grun. x x -

A. minutissima Kütz. x x -

var. *minutissima* x x -

var. *affinis* (Grun.) L.-B. - x -

A. oblongella Østrup* - x -

A. rupestoides Hohn* - x x

A. subhudsonis Hust. x x -

Achnanthes sp. - x

Cocconeis Ehr.

C. disculus (Schumann) Cl. x x -
C. pediculus Ehr. x x x
C. placentula Ehr.
 var. *placentula* x x x
 var. *euglypta* (Ehr.) Cl. x x x
 var. *lineata* (Ehr.) Cl. x - -
 var. *rouxii* (Brun & Héríb.) Cl. - x -
C. thumensis A. Mayer - - x

Rhoicosphenia Grun.

R. abbreviata (C. Ag.) L.-B.* x x x

BIRAPHIDALES

Amphora Ehr.

A. coffeiformis (C. Ag.) Kütz.
 var. *coffeiformis* - x -
 var. *acutiuscula* (Kütz.) Rabh. - x -
A. copulata (Kütz.) Schoeman
 & Archibald** x x x
A. inariensis Kram. - x -
A. montana Krasske - x -
A. ovalis (Kütz.) Kütz.
 var. *ovalis* x x -
 var. *gracilis* (Ehr.) Grun. x - -
 var. *tallingiae* Gasse - x x
A. pediculus (Kütz.) Grun.* x x x
A. strigosa Hust. - x -
A. tanganyikae Calj. - x -
A. thromboliticola Cocquyt - x -
A. cf. calumetica (Thomas ex
 Wolle) M. Perag. - x -
Amphora sp. - x -

Anomoeoneis Pfitzer

A. sphaerophora (Ehr.) Pfitzer
 f. *sphaerophora** x x -
 f. *sculpta* (Ehr.) Kram. - x -
 var. *guentheri* O. Müll. - x -

Brachysira Kütz.

B. brebissonii Ross - x -
B. microcephala (Grun.) Compère* - x -
B. serians (Bréb.) Round & Mann* x x -

Caloneis Cl.

C. aerophila Bock - x -
C. amphisbaena (Bory) Cl. - x -
C. bacillum (Grun.) Cl.* x x -
C. hyalina Hust. - x -
C. molaris (Grun.) Kram. - x -
C. permagna (Bailey) Cl. - x -
C. limosa (Kütz.) Patrick* - x -
C. ventricosa (Ehr.) Meister*
 var. *ventricosa** - x x
 var. *truncatula* (Grun.) Meist.* x --

Campylodiscus Ehr.

C. tanganicae Hust. - x -

Capartogramma Kufferath

C. amphoroides Ross x x -
C. crucicula (Grun. ex Cl.) Ross* x x -
C. karstenii (Zanon) Ross* x x x
C. rhombicum Ross - x -

Cymatopleura W. Smith

C. calcarata Hust. - x -
C. elliptica (Bréb.) W. Smith
 var. *hibernica* (W. Smith) V.H.* x - -
C. nyansae G.S. West x x x
C. solea (Bréb.) W. Smith*
 var. *solea* x x x
 var. *apiculata* (W. Smith) Ralfs* x x x
 var. *clavata* O. Müll. x - x
 var. *elegans* Vir. x - x
 var. *laticeps* O. Müll. x - x
 var. *nyanzae* G.S. West - - x
 var. *rugosa* O. Müll. - - x
C. subconstricta O. Müll.* - - x

Cymbella Ag.

C. aequalis W. Smith x - -
C. affinis Kütz. - x x
C. amphicephala Nägeli - x -
C. caespitosa (Kütz.) Brun x x -
C. cistula (Ehr.) Kirchner*
 var. *cistula* x x x
 var. *maculata* (Kütz.) V.H.* - - x
C. comuta (Ehr.) Ross* x x x
C. cucumis A. Schmidt - x -
C. cuspidata Kütz. x x -

<i>C. cymbiformis</i> Ag.*		var. <i>saxonica</i> (Kütz.) Patrick	- - x
var. <i>cymbiformis</i>	x x x	<i>E. argus</i> (Ehr.) Kütz.	
var. <i>nonpunctata</i> Fontell	- x -	var. <i>argus</i>	x x -
<i>C. elginensis</i> Kram.*	x x x	var. <i>alpestris</i> Grun.*	x - -
<i>C. grossestriata</i> O. Müll.		<i>E. sorex</i> Kütz.	x x x
var. <i>grossestriata</i>	x x x	<i>E. turgida</i> (Ehr.) Kütz.	x x x
var. <i>tanganyikae</i> G.S. West*	- x -		
<i>C. laevis</i> Nägeli*	- x -	Frustulia Rabh.	
<i>C. leptoceros</i> (Ehr.) Kütz.*		<i>F. rhomboides</i> (Ehr.) De Toni*	
var. <i>leptoceros</i>	- x x	var. <i>rhomboides</i>	x x x
var. <i>angusta</i> Grun.	x - -	var. <i>crassinervia</i> (Bréb.) Ross	- x -
<i>C. lunata</i> W. Smith*	- x -	var. <i>saxonica</i> (Rabh.) De Toni *	- x x
<i>C. lunula</i> (Ehr.) Grun.	x - -	<i>F. vulgaris</i> (Thwaites) De Toni*	- x -
<i>C. cf. mendosa</i> VanLandingham*	- x -		
<i>C. microcephala</i> Grun.	- x -	Gomphocymbella O. Müll.	
<i>C. minuta</i> Hilse ex Rabh.*	x x x	<i>G. aschersonii</i> O. Müll.	x - -
<i>C. muelleri</i> Hust.*	x x x	<i>G. beccarii</i> (Grun.) Forti*	x x x
<i>C. naviculoides</i> Hust.	- x -	<i>G. gracilis</i> Hust.	x x x
<i>C. parva</i> (W. Smith) Wolle	x x -	<i>G. muelleri</i> Kociolek & Stoermer	- x -
<i>C. prostrata</i> Berk.	x - -	<i>G. rossii</i> Kociolek & Stoermer	- x -
<i>C. silesiaca</i> Bleich ex Rabh.*	- x -	<i>G. tanganyikae</i> Kociolek & Stoermer	- x -
<i>C. subcuspidata</i> Krammer*	x - -	<i>Gomphocymbella</i> sp.	- - x
<i>C. triangulum</i> Ehr.	x - -		
<i>C. tumida</i> (Bréb.) V.H.	x - x	Gomphonema Ag.	
<i>C. turgida</i> (Greg.) Cl.*	x x x	<i>G. acuminatum</i> Ehr.	- x -
<i>Cymbella</i> sp.	- x -	<i>G. aequatoriale</i> Hust.	x x x
		<i>G. affine</i> Kütz.	- x -
Cymbellonitzschia Hust.		<i>G. africanum</i> G.S. West	
<i>C. minima</i> Hust.	x x -	f. <i>africanum</i>	- x -
		f. <i>turris</i> Kufferath	- x -
Denticula Kütz.		<i>G. angustatum</i> (Kütz.) Rabh.	x - -
<i>Denticula</i> sp.	- x -	<i>G. apicetrapezon</i> Kufferath**	- x -
		<i>G. augur</i> Ehr.	
Diploneis Ehr.		var. <i>turris</i> (Ehr.) L.-B.*	x x -
<i>D. elliptica</i> (Kütz.) Cl.*	x x -	<i>G. brachyneura</i> O. Müll.	x - x
<i>D. finnica</i> (Ehr.) Cl.	- x -	<i>G. clavatum</i> Ehr.*	x - x
<i>D. oblongella</i> (Nägeli ex Kütz.)		<i>G. clevei</i> Fricke	x x x
Cl.*	x x -	<i>G. dichotomum</i> Kütz.*	x x -
<i>D. ovalis</i> (Hilse) Cl.*	x x -	<i>G. exiguum</i> Kütz.	- x x
<i>D. smithii</i> (Bréb. ex W. Smith) Cl.*	x x -	<i>G. frickei</i> O. Müll.	x - -
<i>D. subovalis</i> Cl.	x x -	<i>G. gracile</i> Ehr.*	
<i>Diploneis</i> sp.	- x -	var. <i>gracile</i>	x x x
		f. <i>turris</i> Hust.	- x -
Epithemia Bréb. ex Kütz.		var. <i>auritum</i> (Kütz.) Grun.	x - -
<i>E. adnata</i> (Kütz.) Bréb.*		var. <i>dichotomum</i> (W. Smith) V.H.	x x -
var. <i>adnata</i>	x x x	var. <i>naviculoides</i> (W. Smith)	
var. <i>porcellus</i> (Grun.) Ross*	x - x	Grun*	x - -
var. <i>proboscidea</i> (Kütz.) Hendey*	x - -	<i>G. kilhamii</i> Kociolek & Stoermer	- x -

<i>G. navicella</i> O. Müll.	x - -	<i>N. arenariaeformis</i> Pant.	- - x
<i>G. olivaceum</i> (Hornemann) Bréb.	- x -	<i>N. arvensis</i> Hust.	x x -
<i>G. paddockii</i> Kociolek & Stoermer	- x -	<i>N. atomus</i> (Kütz.) Grun.	x - -
<i>G. parvulum</i> (Kütz.) Kütz.*	x x x	<i>N. avenacea</i> (Bréb. & Godey)	
<i>G. pumilum</i> (Grun.) Reich. &		Bréb.*	- x -
L.-B.*		<i>N. bacillum</i> Ehr.*	- x -
[var. <i>pusillum</i> Mayer]	- - x	<i>N. bahusiensis</i> Grün.	x x -
<i>G. sparsistriatum</i> O. Müll.	x - -	<i>N. barbarica</i> Hust.	x x x
<i>G. truncatum</i> Ehr.*	x - -	<i>N. brevissima</i> Hust.*	- x -
<i>G. vibrio</i> Ehr.*	x - -	<i>N. capitata</i> Ehr.	
		var. <i>capitata</i>	- x -
Gomphonitzschia Grun.		var. <i>hungarica</i> (Grun.) Ross	x x -
<i>G. ungeri</i> Grun.	x x x	<i>N. capitatoradiata</i> Germain*	x x x
<i>Gomphonitzschia</i> sp.	- - x	<i>N. cincta</i> (Ehr.) Ralfs	x x -
		<i>N. cohnii</i> (Hilse) L.-B.*	x - -
Gyrosigma Hass.		<i>N. concentrica</i> Carter*	x - -
<i>G. acuminatum</i> (Kütz.) Rabh.	- x -	<i>N. confervacea</i> (Kütz.) Grun.	x x -
<i>G. attenuatum</i> (Kütz.) Rabh.	- x -	<i>N. contenta</i> Grun.	- x -
<i>G. balticum</i> (Ehr.) Rabh.	- x -	<i>N. costulata</i> Grun.	x x -
<i>G. distortum</i> (W. Smith) Griff.		<i>N. crucicula</i> (W. Smith) Donkin	x x -
& Henfrey		<i>N. cryptocephala</i> Kütz.*	x x x
var. <i>parkeri</i> (Harrison) Cl.	- - x	<i>N. cryptotenella</i> L.-B.*	x x -
<i>G. nodiferum</i> (Grun.) Reimer*	x x -	<i>N. cuspidata</i> (Kütz.) Kütz.*	x x x
<i>G. scalproides</i> (Rabh.) Cl.	x x -	<i>N. damasii</i> Hust.	x x x
<i>G. sciotense</i> (Sull. et Wormley) Cl.	- x -	<i>N. decussis</i> Østrup*	x x x
<i>G. spenceri</i> (Quekett) Griffith &		<i>N. digitoradiata</i> (Greg.) Ralfs	x x -
Henfrey	- x -	<i>N. distincta</i> G.S. West	- x -
<i>G. wormleyi</i> (Sull.) Boyer	x x -	<i>N. elaborata</i> Hust.	- x -
<i>Gyrosigma</i> sp.	- - x	<i>N. elginensis</i> (Greg.) Ralfs*	x x -
		<i>N. erifuga</i> L.-B.	- x -
Hantzschia Grun.		<i>N. exigua</i> (Greg.) Grun.*	
<i>H. amphioxys</i> (Ehr.) Grun.		var. <i>exigua</i>	x x x
var. <i>amphioxys</i>	x x x	var. <i>lanceolata</i> O. Müll.*	x - -
var. <i>africana</i> Hust.	- x -	<i>N. faceta</i> Hust.	- - x
var. <i>africana</i> f. <i>brevis</i> Compère	- x -	<i>N. fossalis</i> Krasske	
var. <i>vivax</i> Grun.	x - -	var. <i>obsidialis</i> (Hust.) L.-B.	- x -
<i>H. virgata</i> (Roper) Grun.	- x -	<i>N. gallica</i> (W. Smith) V.H.	
		var. <i>gallica</i>	- x -
Mastogloia Thwaites		var. <i>perpusilla</i> (Grun.) L.-B.	- x -
<i>M. elliptica</i> (Ag.) Cl.		<i>N. gastrum</i> (Ehr.) Kütz.*	
var. <i>elliptica</i>	- x -	var. <i>gastrum</i>	x x x
var. <i>dansei</i> (Thwaites) Cl.	- x -	var. <i>signata</i> Hust.	- x -
<i>M. smithii</i> Thwaites	- x -	var. <i>tanganikae</i> Kufferath	- x -
		var. <i>transvaalensis</i> Chohn.	- x -
Navicula Bory		var. <i>turgida</i> O. Müll.	x - -
<i>N. absoluta</i> Hust.	- x -	<i>N. goeppertiana</i> (Bleisch)	
<i>N. agrestis</i> Hust.	- x -	H.L. Smith*	x x -
<i>N. amplexans</i> Hust.	- x -		

<i>N. halophila</i> (Grun.) Cl.		var. <i>permagna</i> O. Müll.	x - -
f. <i>halophila</i> *	- x -	<i>N. aff. rhynchocephala</i> Kütz.	- x -
f. <i>tenuirostris</i> Hust.	- x -	<i>N. riparia</i> Hust.	- x -
<i>N. hambergii</i> Hust.	- x -	<i>N. rotunda</i> Hust.	- x -
<i>N. hasta</i> Pant.	- x -	<i>N. salinarum</i> Grun.	- x -
<i>N. laevis</i> Kütz.*	x - -	<i>N. scabellum</i> Hust.	- - x
<i>N. lapidosa</i> Krasske	- x -	<i>N. schroeteri</i> Meister	- x -
<i>N. marginestriata</i> Hust.	- x -	<i>N. scutelloides</i> W. Smith ex Greg.	x x x
<i>N. mereschowskii</i> O. Müll.		<i>N. seminuloides</i> Hust.*	x x x
var. <i>mereschowskii</i>	x x -	<i>N. seminulum</i> Grun.	
f. <i>minor</i> O. Müll.	x - -	var. <i>hustedtii</i> Patrick	- x -
var. <i>recta</i> O. Müll.	x - -	<i>N. subcostulata</i> Hust.	- x -
<i>N. minima</i> Grun.*	- - x	<i>N. subrhynchocephala</i> Hust.	- x -
<i>N. minuscula</i> Grun.		<i>N. trivialis</i> L.-B.*	- x -
var. <i>muralis</i> (Grun.) L.-B.*	x x -	<i>N. tuscula</i> Ehr.	- x -
<i>N. miramaris</i> Frenguelli	- x -	<i>N. vanheurckii</i> Patrick*	- x -
<i>N. modica</i> Hust.	x x -	<i>N. vanmeelii</i> Kufferath	- x -
<i>N. monoculata</i> Hust.		<i>N. veneta</i> Kütz.*	- x -
var. <i>omissa</i> (Hust.) L.-B.	x x -	<i>N. ventralis</i> Krasske	- - x
<i>N. mutica</i> Kütz.		<i>N. viridula</i> (Kütz.) Ehr.	
f. <i>mutica</i>	x x x	var. <i>viridula</i>	- x x
f. <i>intermedia</i> Hust.	- x -	var. <i>linearis</i> Hust.	- x -
<i>N. muticoides</i> Hust.	- x -	var. <i>rostellata</i> (Kütz.) Cl.	x x -
<i>N. nivaloides</i> Bock	- x -	<i>N. zanonii</i> Hust.	x x x
<i>N. nyassensis</i> O. Müll.*		<i>Navicula</i> sp.	x x x
f. <i>nyassensis</i>	x x x		
f. <i>minor</i> O. Müll.	x - -	Neidium Pfitzer	
var. <i>capitata</i> O. Müll.	x - -	<i>N. affine</i> (Ehr.) Pfitzer*	
var. <i>elliptica</i> O. Müll.	x - -	var. <i>affine</i>	- x -
var. <i>longirostris</i> O. Müll.	x - -	var. <i>humerus</i> Reimer	- x -
<i>N. obesa</i> O. Müll.	x x -	<i>N. ampliatus</i> (Ehr.) Kram.*	x x -
<i>N. oblonga</i> (Kütz.) Kütz.	- x x	<i>N. dilatatus</i> (Ehr.) Cl.	
<i>N. paramutica</i> Bock	- x -	f. <i>dilatatus</i>	x x -
<i>N. perlatoides</i> (O. Müll.) Hust.*	x x -	forma	- x -
<i>N. perrotettii</i> Grun.	- - x	<i>N. dubium</i> (Ehr.) Cl.	x x -
<i>N. perminuta</i> Grun.*	- x -	<i>N. iridis</i> (Ehr.) Cl.*	- x -
<i>N. perparva</i> Hust.	- x -	<i>N. productum</i> (W. Smith) Cl.*	x x -
<i>N. placentula</i> (Ehr.) Kütz.	x x -	<i>N. tanganyikae</i> (G.S. West) Mills*	- x -
<i>N. platycephala</i> O. Müll.	x x x	<i>Neidium</i> sp.	- x -
<i>N. pseudolanceolata</i> L.-B.*	- x -		
<i>N. pupula</i> Kütz.*	x x x	Nitzschia Hass.**	
<i>N. pygmaea</i> Kütz.	- x -	<i>N. acicularis</i> (Kütz.) W. Smith	
<i>N. radiosa</i> Kütz.		var. <i>acicularis</i>	x x x
var. <i>radiosa</i>	x x x	f. <i>angustior</i> O. Müll.	x - -
var. <i>acuta</i> Grun.	x - -	var. <i>major</i> O. Müll.	x - x
var. <i>parva</i> Wallace	- - x	var. <i>closterioides</i> Grun.	- x -
<i>N. reinhardtii</i> Grun.	x x -	<i>N. adapta</i> Hust.	- x x
<i>N. rhynchocephala</i> Kütz.		<i>N. aequalis</i> Hust.	x x x
var. <i>rhynchocephala</i>	x x x		

<i>N. amphibia</i> Grun.*		<i>N. nana</i> Grun.*	- x -
var. <i>amphibia</i>	x x x	<i>N. nyassensis</i> O. Müll.	x x x
var. <i>pelagica</i> Hust.	- - x	<i>N. obligata</i> Archibald	- x -
<i>N. amphioxoides</i> Hust.	- x x	<i>N. obsoleta</i> Hust.	- x x
<i>N. angustata</i> (W. Smith) Grun.*	- x -	<i>N. obtusa</i> W. Smith	
<i>N. apiceconica</i> Kufferath	x -	var. <i>obtusa</i>	- x -
<i>N. archibaldii</i> L.-B.	- x -	var. <i>schweinfurthii</i> Grun.	- x -
<i>N. asterionelloides</i> O. Müll.	x x -	<i>N. palea</i> (Kütz.) W. Smith*	
<i>N. bacillum</i> Hust.	x x -	var. <i>palea</i>	x x x
<i>N. calida</i> Grun.*	- x -	var. <i>debilis</i> (Kütz.) Grun.	x - x
<i>N. capitellata</i> Hust.*	- x -	var. <i>hustedtiana</i> Compère	- x -
<i>N. clausii</i> Hantzsch	- x -	var. <i>tenuirostris</i> L.-B.	x x -
<i>N. closterium</i> (Ehr.) W. Smith*	- x -	<i>N. paleacea</i> (Grun.) Grun.*	x x -
<i>N. communis</i> Rabh.	- x x	<i>N. pelagica</i> O. Müll.	x - -
<i>N. compressa</i> (Bailey) Boyer		<i>N. perminuta</i> (Grun.) M. Perag.*	- x -
var. <i>vexans</i> (Grun.) L.-B.	- x -	<i>N. profunda</i> Kufferath	- x -
<i>N. constricta</i> (Kütz.) Ralfs	- x -	<i>N. pseudosubrostrata</i> Kufferath	- x -
<i>N. dissipata</i> (Kütz.) Grun.		<i>N. recta</i> Hantzsch*	x x -
var. <i>dissipata</i>	- x -	<i>N. reversa</i> W. Smith	- x -
var. <i>media</i> (Hantzsch) Grun.	- x -	<i>N. sigma</i> (Kütz.) W. Smith	
<i>N. epiphytica</i> O. Müll.	x x x	var. <i>sigma</i>	- x -
<i>N. epiphyticoides</i> Hust.	x x x	var. <i>rigidula</i> (H. & M. Perag.)	
<i>N. falcata</i> O. Müll.	- x -	Grun.	- x -
<i>N. fonticola</i> Grun.*	x x x	<i>N. aff. sigmaformis</i> Hust.	- x -
<i>N. frauenfeldii</i> Grun.	x - -	<i>N. sigmoidea</i> (Nitzsch) W. Smith	x x -
<i>N. frustulum</i> (Kütz.) Grun.	x x x	<i>N. siliqua</i> Archibald	x x -
<i>N. fruticosa</i> Hust.*	- x x	<i>N. solita</i> Hust.	- x -
<i>N. gracilis</i> Hantzsch	x x x	<i>N. spiculoides</i> Hust.	- - x
<i>N. granulata</i> Grun.	- x -	<i>N. spiculum</i> Hust.	x x x
<i>N. goetzeana</i> O. Müll.		<i>N. subacicularis</i> Hust.*	- x x
var. <i>gracilior</i> Hust.	- - x	<i>N. subregula</i> Hust.	- x -
<i>N. inconspicua</i> Grun.*	- x -	<i>N. tarda</i> Hust.	- x -
<i>N. intermedia</i> Hantzsch		<i>N. tropica</i> Hust.	- x -
var. <i>intermedia</i>	x x -	<i>N. tubicola</i> Grun.	x x -
var. <i>robusta</i> (Hust.) Hust.	- x -	<i>N. umbonata</i> (Ehr.) L.-B.*	x x x
<i>N. intermissa</i> Hust.	- - x	<i>N. vitrea</i> Norman	x x -
<i>N. kapimbiense</i> Kufferath	- x	<i>Nitzschia</i> sp.	x x -
<i>N. lacustris</i> Hust.	- x x		
<i>N. lancettula</i> O. Müll.	x x x	Pinnularia Ehr.	
<i>N. levidensis</i> (W. Smith) Grun.*		<i>P. acrosphaeria</i> Rabh.*	
var. <i>levidensis</i>	- x -	f. <i>acrosphaeria</i>	x x -
var. <i>victoriae</i> (Grun.) Chohn.*	x x -	f. <i>minor</i> Cl.	x - -
<i>N. liebetruthii</i> Rabh.	- x -	<i>P. amaniensis</i> Hust.	- x -
<i>N. linearis</i> W. Smith		<i>P. appendiculata</i> (Ag.) Cl.	- x -
var. <i>linearis</i>	x x x	<i>P. bogotensis</i> (Grun.) Cl.	- x -
var. <i>subtilis</i> (Grun.) Hust.	x -	<i>P. borealis</i> Ehr.	
var. <i>tenuis</i> (W. Smith) Grun.	x x x	f. <i>borealis</i>	- x x
<i>N. littoralis</i> Grun.*	x -	f. <i>rectangularis</i> Carlson	- x -
<i>N. microcephala</i> Grun.	- x x		

<i>P. brevicostata</i> Cl.	- x -	<i>Rhopalodia</i> sp.	x x -
<i>P. cardinalis</i> (Ehr.) W. Smith*	- - x		
<i>P. dactylus</i> Ehr.	- x -	Stauroneis Ehr.	
<i>P. divergens</i> W. Smith		<i>S. agrestis</i> Petersen	- x -
var. <i>elliptica</i> (Grun.) Cl.	- x -	<i>S. anceps</i> Ehr.*	x x x
<i>P. gibba</i> Ehr.*		<i>S. dahomensis</i> Hust.*	- x -
var. <i>gibba</i>	x x x	<i>S. manguinii</i> Guermuer	- x -
var. <i>linearis</i> Hust.	- x -	<i>S. obtusa</i> Lgst.	- x -
var. <i>sancta</i> Grun.	- x -	<i>S. phoenicenteron</i> (Nitzsch) Ehr.	
<i>P. hartleyana</i> Greville	- x -	var. <i>phoenicenteron</i>	x x x
<i>P. legumen</i> (Ehr.) Ehr.	- x -	var. <i>amphilepta</i> (Ehr.) Cl.	- x -
<i>P. mesolepta</i> (Ehr.) W. Smith*	x x -	<i>S. schinzii</i> Brun.	
<i>P. microstauron</i> (Ehr.) Cl.	- x x	var. <i>nyassensis</i> O. Müll.	x - -
<i>P. obscura</i> Krasske	x x -		
<i>P. scaettae</i> Zanon	- x -	Surirella Turp.**	
<i>P. stomatophora</i> (Grun.) Cl.	- x -	<i>S. aculeata</i> Hust.	- x -
<i>P. subcapitata</i> Greg.		<i>S. acuminata</i> Hust.	- x -
var. <i>subcapitata</i>	x x x	<i>S. angusta</i> Kütz.	- x -
var. <i>elongata</i> Kram.	- x -	<i>S. astridae</i> Hust.	- x -
var. <i>hilseana</i> (Janisch) O. Müll.	x - -	<i>S. bifrons</i> Ehr.	
var. <i>paucistriata</i> Grun.	x - -	var. <i>bifrons</i>	x x x
<i>P. tropica</i> Hust.	- x x	var. <i>intermedia</i> O. Müll.	x - x
<i>P. viridis</i> (Nitzsch) Ehr.*	x x x	var. <i>tumida</i> O. Müll.*	x - x
<i>Pinnularia</i> sp.	- x -	<i>S. biseriata</i> Bréb.	- x x
		<i>S. brebissonii</i> Kram. & L.-B.	- x -
Pleurosigma W. Smith		<i>S. brevicostata</i> O. Müll.*	
<i>P. normannii</i> Ralfs	x - -	var. <i>brevicostata</i>	x x x
		var. <i>constricta</i> Hust.	- x -
Rhopalodia O. Müll.**		var. <i>elongata</i> Hust.	- x -
<i>R. gibba</i> (Ehr.) O. Müll.*		<i>S. debesii</i> Hust.	- x -
var. <i>gibba</i>	x x x	<i>S. decipiens</i> Hust.	- x -
var. <i>parallela</i> (Grun.)		<i>S. effusa</i> Hust.	- x -
H. & M. Perag.*	x x -	<i>S. elegans</i> Ehr.	- x -
<i>R. gibberula</i> (Ehr.) O. Müll.*	x x x	<i>S. elegantula</i> Hust.	- x -
<i>R. gracilis</i> O. Müll.		<i>S. engleri</i> O. Müll.*	x x x
var. <i>gracilis</i>	x x x	<i>S. fasciculata</i> O. Müll.	- x -
var. <i>impressa</i> O. Müll.	x - -	<i>S. fuellebornii</i> O. Müll.*	
var. <i>impressa</i> f. <i>perlonga</i> O. Müll.	x - -	var. <i>fuellebornii</i>	x x x
var. <i>linearis</i> O. Müll.	x - -	var. <i>elliptica</i> O. Müll.	x x x
var. <i>orculaeformis</i> O. Müll.	x - -	var. <i>tumida</i> Hust.	- x -
var. <i>undulata</i> O. Müll.	x - -	var. <i>worthingtonii</i> Bachm.	x - x
<i>R. hirundiniformis</i> O. Müll.*		<i>S. gradifera</i> Hust.	- x -
var. <i>hirundiniformis</i>	x x x	<i>S. heidenii</i> Hust.	- x -
var. <i>turgida</i> Fricke	- x -	<i>S. lancettula</i> Hust.	- x -
<i>R. operculata</i> (Ag.) Håkansson	- x -	<i>S. latecostata</i> Hust.	- x -
<i>R. rhopala</i> (Ehr.) Hust.*	x x x	<i>S. linearis</i> W. Smith*	
<i>R. stuhlmannii</i> O. Müll.	x - x	var. <i>linearis</i>	x x x
<i>R. uncinata</i> O. Müll.	x - -	var. <i>elliptica</i> O. Müll.	x - -

<i>S. margaritacea</i> O. Müll.	x x x	<i>S. cf. spinifera</i> Hust.	- - x
<i>S. margaritifera</i> Hust.	- x -	<i>S. spiralis</i> Kütz.	x - -
<i>S. muelleri</i> Forti	x - -	<i>S. spiraloides</i> Hust.	- x -
[<i>S. muelleri</i> Hust., non Forti]**	- x -	<i>S. splendida</i> (Ehr.) Kütz.*	x x x
<i>S. nervosa</i> (Schmidt) Mayer*	x x x	<i>S. striatula</i> Turp.	- x -
<i>S. nyassae</i> O. Müll.*		<i>S. striolata</i> Hust.	- x -
var. <i>nyassae</i>	x x x	<i>S. subcontorta</i> Hust.	- x -
var. <i>sagitta</i> O. Müll.	x - x	<i>S. subrobusta</i> Hust.	- x -
<i>S. obtusiuscula</i> G.S. West	- x -	<i>S. tenera</i> Greg.*	x x x
<i>S. ovalis</i> Bréb.	- x -	<i>S. terryi</i> Ward ex Terry	- x -
<i>S. plana</i> G.S. West	- x x	<i>S. turbo</i> O. Müll.	x - x
<i>S. reicheltii</i> Hust.	- x -	<i>S. vasta</i> Hust.	- x -
<i>S. sparsipunctata</i> Hust.*	- x -		

List of synonyms

with nomenclatural and taxonomic comments

The following synonyms are used in earlier publications on the algal flora of the three lakes.

CYANOPHYTA

Anabaena flos-aquae var. *circularis* G.S. West = *Anabaenopsis circularis*

Anabaenopsis elenkenii Mill. f. *circularis* (G.S. West) Jeeji Bai = *Anabaenopsis circularis*

Calothrix cartilaginea G.S. West = *Homeothrix cartilaginea*

Calothrix juliana (Menegh.) Born. & Flah. = *Homeothrix juliana*

Chroococcus dispersus (Keissl.) Lemm. = *Chroococcus minor* f. *dispersus*

Clathrocystis aeruginosa (Kütz.) Henfrey = *Microcystis aeruginosa*

Diplocystis incerta (Lemm.) Daily = *Microcystis pulvereae* var. *incerta*

Gloeocapsa limnetica (Lemm.) Hollerb. = *Chroococcus limneticus*

Gloeocapsa minor (Kütz.) Hollerb. f. *dispersa* (Keissl.) Holl. = *Chroococcus minor* f. *dispersus*

Gloeocapsa minuta (Kütz.) Hollerb. = *Chroococcus minutus*

Gloeocapsa turgida (Kütz.) Hollerb. = *Chroococcus turgidus*

Microcystis elabens (Bréb.) Kütz. = *Aphanothece elabens*

Microcystis flos-aquae is often treated as a synonym or forma of *M. aeruginosa*

Microcystis incerta (Lemm.) Lemm. = *Microcystis pulvereae* var. *incerta*

Microcystis stagnalis var. *pulchra* Lemm. = *Microcystis pulvereae* f. *pulchra*

Nostoc sphaerocarpa Born. & Fl. = *Nodularia harveyana*

Pilgeria brasiliensis Schmidle, reported by THOMASSON (1956: 261) from Lake Victoria is a doubtful taxon, the type of which could belong to the Chlorophyceae, according to DROUET & DAILY (1956: 158).

Plectonema tomasinianum Gom. = *Plectonema mirabile*

Pseudanabaena sp. 1, cf. Komarek & Kling (1991: 29).

Pseudanabaena sp. 2, cf. Komarek & Kling (1991: 29).

Romeria leopoliensis (Racib.) Koczw. = *Synechococcus leopoliensis*

Scytonema crispum (Ag.) Born. = *Scytonema cincinnatum*

Scytonema mirabile (Dilw.) Born. = *Scytonema figuratum*

Scytonema tenuissima Kütz. = *Spirulina subsalsa*

CHLOROPHYTA

CHLOROCOCCALES

Ankistrodesmus longissimus (Lemm.) Wille = *Closteriopsis longissima*

Ankistrodesmus falcatus var. *acicularis* (A. Br.) G.S. West = *Monoraphidium griffithii*

Ankistrodesmus falcatus var. *mirabilis* West & West: unsufficiently known variety, sometimes treated as *Monoraphidium mirabile* (West & West) Pankow

Ankistrodesmus falcatus var. *setiformis* f. *brevis* Nyg. = *Koliella setiformis*

Ankistrodesmus falcatus var. *spirilliformis* G.S. West = *Monoraphidium contortum*

Ankistrodesmus nitzschioides G.S. West = *Schroederia nitzschioides*

Ankistrodesmus setiger (Schröd.) G.S. West = *Schroederia setigera*

Cerasterias raphidioides Reinsch = *Actinastrum raphidioides*

Characium pringsheimii A. Br. = *Characium ornithocephalum* var. *pringsheimii*

- Characium pyriforme* Lund. = *Characium pseudopyriforme*
Chodatella armata Lemm. = *Franceia armata*
Chodatella cingula (G.M. Smith) Fott = *Lagerheimia cingula*
Chodatella longiseta Lemm. = *Lagerheimia longiseta*
Chodatella quadriseta Lemm. = *Lagerheimia genevensis*
Chodatella subsalsa Lemm. = *Lagerheimia subsalsa*
Chodatella subsalsa var. *minor* = *Lagerheimia subsalsa* [var. *minor*]
Coelastrum cambricum var. *nasutum* (Schmidle) G.S. West = *C. pulchrum* var. *nasutum*
Coelastrum cubicum Näg. = *Coelastrum sphaericum*
Coelastrum pulchrum var. *intermedium* Bohl. = *Coelastrum indicum*
Coelastrum pulchrum Schmidle var. *nasutum* Schmidle: KOMAREK & FOTT (1983: 734) provisionally classify this variety as a synonym of *Coelastrum speciosum* (Wolle) Brunth. Further revision is necessary, however.
Crucigenia apiculata (Lemm.) Schmidle = *Crucigeniella apiculata*
Crucigenia apiculata (Lemm.) Schmidle var. *africana* Wolosz. = *Crucigeniella africana*
Crucigenia cuneiformis (Schmidle) Brunth. = *Dispora cuneiformis*
Crucigenia heteracantha Nordst. = *Tetrastrum heteracanthum*
Crucigenia irregularis Wille = *Willea irregularis*
Crucigenia rectangularis (Näg.) Gay = *Crucigeniella rectangularis*
Crucigenia schroederi (Schmidle) Schmidle = *Tetrastrum staurogeniaeforme*
Crucigenia tetracantha G.S. West = *Pediastrum simplex*
Dactylococcopsis africana G.S. West = *Ankistrodesmus falcatus*
Dactylococcopsis raphidioides Hansg. = *Stichococcus subtilis*
Desmatractum nyanzae (Wolosz.) G.S. West : Syn. = *Peniococcus nyanzae* Wolosz. The generic status of this taxon is unclear, its position in the genus *Desmatractum* is questionable (KOMAREK & FOTT 1983: 262).
Dictyosphaerium primarium Skuja = *Dictyosphaerium subsolitarum*
Dictyosphaerium reniforme Bulnh. = *Dimorphococcus lunatus*
Gloeococcus schroeteri (Chod.) Lemm. = *Sphaerocystis schroeteri*
Gloeocystis rehmani Wolosz. = *Nephrocystium rehmanii*
Hofmania africana Wolosz. : At the genus level, the name *Hofmania* has been replaced by *Komarekia* (Fott 1981) but the position of this species is unclear; it may belong to *Komarekia* or another genus (KOMAREK & FOTT 1983: 753).
Ineffigiata neglecta West & West = *Botryococcus braunii*
Keratococcus suecicus has been reported from L. Tanganyika and L. Victoria but was probably confused with *Schroederia setigera* (KOMAREK & FOTT 1983: 625).
Kirchneriella lunata Schmidle : KOMAREK & FOTT (1983: 669) suggest that this name could be a synonym of *K. lunaris*; in this case, the correct name of the species should be *K. lunata*.
Lagerheimia subsalsa = *Chodatella subsalsa* var. *citriformis*. This variety was probably described from old, somewhat deformed cells of the typical variety (KOMAREK & FOTT 1983: 472). Further revision needed.
Lagerheimia subsalsa [var. *minor*] : Described as *Chodatella subsalsa* var. *minor*. Revision is needed to confirm taxonomic status before new combination can be made.
Monoraphidium setiforme (Nyg.) Kom.-Legn. = *Monoraphidium komarkovae*
Pediastrum areanosum (Racib.) Racib. and var. *rugulosum* (G.S. West) G.M. Smith = *Pediastrum angulosum*
Pediastrum bidentulum A. Br. = *Pediastrum boryanum*

Pediastrum boryanum var. *brevicorne* f. *granulatum* (Racib.) Parra = *Pediastrum boryanum* var. *longicome*

Pediastrum boryanum var. *rugulosum* G.S. West = *Pediastrum boryanum*

Pediastrum boryanum var. *undulatum* Wille = *Pediastrum boryanum*

Pediastrum clathratum (Schröt.) Lemm. : The typical variety, the var. *microporum* Lemm. and the formae *majus*, *ovatum*, *radians* and *asperum* are synonyms of *P. simplex* Meyen var. *simplex*.

Pediastrum clathratum var. *mirabile* Wolosz. could be a good variety of *P. simplex* (KOMAREK & FOTT 1983: 280); treated as synonym of *P. simplex* var. *simplex* by PARRA (1979: 112).

Pediastrum duplex Meyen var. *cohaerens* Bohl. : This variety needs further revision, it is possibly identical with *P. argentinense* Bourr. & Tell (KOMAREK & FOTT 1983: 300).

Pediastrum duplex Meyen var. *rectangulare* Bohl. = *Pediastrum argentinense*

Pediastrum duplex var. *clathratum* A. Br. = *P. duplex* var. *duplex*

Pediastrum duplex var. *gracillimum* West & West = *P. duplex* var. *duplex*

Pediastrum duplex var. *inflatum* Wolosz. = *P. duplex* var. *duplex*

Pediastrum duplex var. *reticulatum* Lagerh. = *P. duplex* var. *duplex*

Pediastrum gracillimum (West & West) Thunm. = *P. duplex* var. *duplex*

Pediastrum simplex Meyen var. *annulatum* Chod. : Taxonomic status needs revision (KOMAREK & FOTT 1983: 290); treated as synonym of *P. simplex* var. *simplex* by PARRA (1979: 111).

Pediastrum simplex var. *clathratum* = *Pediastrum simplex* var. *simplex*.

Pediastrum simplex Meyen var. *duodenarium* (Bail.) Rabh. : This variety may be identical to var. *biwaense* Fukush. Further revision is needed (KOMAREK & FOTT 1983: 290); treated as synonym of *P. simplex* var. *simplex* by PARRA (1979: 11).

Pediastrum simplex Meyen var. *radians* Lemm. : Taxonomic status needs revision (KOMAREK & FOTT 1983: 290); treated as synonym of *P. simplex* var. *simplex* by PARRA (1979: 112).

Pediastrum simplex Meyen var. *radians* Lemm. f. *contortum* Wolosz. : treated as a synonym of *P. simplex* var. *simplex* by PARRA (1979: 112).

Pediastrum sturmii Reinsch = *Pediastrum simplex* var. *sturmii*

Pediastrum tetras (Ehr.) Ralfs var. *perforatum* Wolosz. : Taxonomic status requires revision (KOMAREK & FOTT 1983: 303); treated as synonym of *P. tetras* by PARRA (1979: 116).

Pediastrum triangulum (Ehr.) A. Br. var. *angustum* Nitardy = *Pediastrum simplex* var. *simplex*.

Pediastrum triangulum var. *latum* Nitardy = *Pediastrum simplex* var. *simplex*

Pediastrum muticum Kütz. = *Pediastrum boryanum* var. *brevicorne*

Pediastrum westii Wolosz. : probably a variety of *P. boryanum* (Turp.) Menegh. (KOMAREK & FOTT 1983: 298).

Polyedrum trigonum (Näg.) Hansg. var. *tetragonum* (Näg.) Rabh. = *Tetraedron tetragonum*

Rhaphidium braunii Näg. var. *lacustris* Chod. = *Quadrigula lacustris*

Raphidium planctonicum Wolosz. = *Elakotothrix gelatinosa*; according to HINDÄK (1962: 287) *R. planctonicum* is unsufficiently described and could as well be a synonym of *E. genevensis* (Reverd.) Hindäk.

Richteriella botryoides (Schmidle) Lemm. f. *quadriseta* (Lemm.) Chod. = *Micractinium quadrisetum*

Scenedesmus acutiformis var. *brasiliensis* (Bohl.) West & West = *Scenedesmus brasiliensis*

Scenedesmus bijugatus Kütz. = *Scenedesmus obliquus*

Scenedesmus bijugatus Kütz. var. *alternans* (Reinsch) Hansg. = *Scenedesmus alternans*

- Scenedesmus bijugatus* Kütz. f. *arcuatus* (Lemm.) West & West = *Scenedesmus obtusus*
Scenedesmus curvatus Bohl. = *Raysiella curvata*
Scenedesmus curvatus Bohl. var. *linearis* = *Raysiella curvata*
Scenedesmus denticulatus var. *linearis* Hansg. = *Scenedesmus aculeolatus*
Scenedesmus ecornis var. *disciformis* Chod. = *Scenedesmus disciformis*
Scenedesmus falcatus Chod. = *Scenedesmus acuminatus*
Scenedesmus hystrix f. Wolosz. = *Scenedesmus woloszynskae*
Scenedesmus longus Meyen var. *maximus* West & West = *Scenedesmus magnus*
Scenedesmus magnus Meyen [var. *arcuatus* Vir.] : Taxonomic revision is needed before a new combination can be made.
Scenedesmus maximus (West & West) Chod. = *Scenedesmus magnus*
Scenedesmus maximus (West & West) Chod. var. *arcuatus* Vir. = *Scenedesmus magnus*
Scenedesmus perforatus var. *pologranulatus* Teil. = *Scenedesmus perforatus*
Scenedesmus platydiscus (G.M. Smith) Chod. = *Scenedesmus arcuatus* var. *platydiscus*
Scenedesmus quadricauda (Turp.) Bréb. : Since Chodat, this name is widely used for a taxon not agreeing with its original type; since a conservation proposal has been introduced (COMPÈRE & KOMAREK 1990) we shall follow current use, pending the recommendation of the nomenclature committees.
Scenedesmus quadricauda var. *opoliensis* (Richt.) West & West = *Scenedesmus opoliensis*.
Selenastrum bibraianum Reinsch = *Ankistrodesmus bibraianus*
Selenastrum gracile Reinsch : *Ankistrodesmus gracilis*
Sorastrum spinulosum var. *hathoris* (Cohn) Lemm. = *Sorastrum hathoris*
Sphaerocystis schroeteri Chod. : syn. = *Gloeococcus schroeteri* (Chod.) Lemm. Confusion may arise with *Eutetramorus fottii* (Hind.) Kom. by some authors. The latter taxon forms autospores while *S. schroeteri* multiplies by zoospores.
Staurogenia cuneiformis Schmidle = *Dispora cuneiformis*
Tetracoccus botryoides W. West = *Westella botryoides*
Tetradasmus ostenfeldii (Wolosz.) G.S. West = *Tetradasmus wisconsinensis* f. *ostenfeldii*
Tetraedron : According to KOMAREK & FOTT (1983), this genus includes true green algae, with a large central or parietal chloroplast provided with a pyrenoid, reproducing by autospores. Many of the species reported from the East African great lakes are questionable since the structure of the chloroplast and the reproduction are unsufficiently known: *T. arthrodesmiiforme*, *T. inflatum*, *T. paradoxum*, *T. trigonum*, *T. victoriae* and the numerous varieties described by Woloszynska. *Tetraedron incus* (Teil.) G.M. Smith which reproduces by means of zoospores should be transferred to *Chlorotetraedron* (Fott & Komarek 1983: 130). *Tetraedron tetraedricum* (Näg.) West & West, based on *Polyedrium tetraedricum* Näg. could be a synonym of *Tetraedron regulare* Kütz. or of the Xanthophyceae *Tetraedriella gigas* (Pasch.) Dedus.
Tetraedron enorme (Ralfs) Hansg. = *Pseudostaurastrum enorme*
Tetraedron hastatum (Reinsch) Hansg. = *Pseudostaurastrum hastatum*
Tetraedron limneticum Borge and var. *minimum* (A. Br.) Hansg. = *Pseudostaurastrum limneticum* and var. *minimum*
Tetraedron lobulatum (Näg.) Hansg. = *Isthmochloron lobulatum*
Tetraedron tetraedricum (Näg.) West & West : could be a *Tetraedriella*
Victoriella ostenfeldii Wolosz. = *Tetradasmus wisconsinensis* f. *ostenfeldii*

ULOTRICHALES

Stichococcus subtilis (Kütz.) Kerck. = *Klebsormidium subtile*

OEDOGENIALES

Oedogonium hirnii var. *africanum* G.S. West = *Oedogonium patulum*

DESMIDIALES

Arthrodesmus controversus West & West = *Staurodesmus convergens*

Arthrodesmus incus Bréb. = *Staurodesmus incus*

Arthrodesmus incus var. *ralfsii* (W. West) West & West = *Staurodesmus incus* var. *ralfsii*

Arthrodesmus fuellebornii Schmidle = *Staurodesmus brevispina* fac.2 *fuellebornii*

Arthrodesmus fuellebornii var. *longispina* Grönb. = *Staurodesmus subulatus* var. *subaequalis*

Arthrodesmus triangularis Lagerh. = *Staurodesmus triangularis*

Arthrodesmus triangularis var. *subtriangularis* (Borge) West & West = *Staurodesmus subtriangularis*

Closterium cynthia De Not. var. *jenneri* (Ralfs) Krieg. = *Closterium jenneri*

Closterium moniliferum var. *galiciense* (Gutw.) G.S. West = *Closterium moniliferum* var. *moniliferum*

Closterium praelongum Bréb. var. *crassius* Schmidle : This variety may only be an extreme form of the typical variety, and needs further study (RUZICKA 1977: 164).

Closterium schroederi Wolosz. = *Closterium kuetzingii* var. *laeve*

Cosmarium australe (Racib.) Lütkem. et formae = *Actinotaenium australe*

Cosmarium aversum West & West = *Cosmarium contractum* var. *aversum*

Cosmarium contractum var. *minutum* (Delp.) West & West = *Cosmarium minutum*

Cosmarium didymocarpum (Lund.) Lütkem. ex Grönb. = *Penium didymocarpum*

Cosmarium globosum Bulnh. = *Actinotaenium globosum*

Cosmarium globosum Bulnh. var. *wollei* West & West = *Actinotaenium wollei*

Cosmarium homalodermum Nordst. var. *minor* Schmidle = *Cosmarium hammeri* var. *schmidlei*

Cosmarium lagenarioides (Roy) Lütkem. = *Actinotaenium lagenarioides*

Cosmarium lagenarioides var. *sidneyense* Racib. = *Actinotaenium sidneyense*

Cosmarium meneghinii Bréb. ex Ralfs var. *concinnum* Rabh. = *Cosmarium meneghinii*

Cosmarium meneghinii var. *octangulare* (Wille) West & West = *Cosmarium impressulum*

Cosmarium moniliforme (Turp.) Ralfs f. *panduriforme* Heimerl = *Cosmarium moniliforme*

Cosmarium muelleri Schmidle = *Cosmarium galeritum* var. *muelleri*

Cosmarium retusiforme f. *abscissa* (Schmidle) Borge = *Cosmarium trilobulatum* var. *abscissum*

Cosmarium subbinale (Nordst.) Lagerh. var. *abyssinicum* Lagerh. and f. *minus* Schmidle = *Cosmarium nymannianum* var. *abyssinicum*

Cosmarium symoensii Van Oye is probably only a form of *Actinotaenium cucurbita*.

Cylindrocystus subpyramidata West & West = *Cosmarium subpyramidatum*, which is probably a species of *Actinotaenium*.

Euastrum binale var. *subelobatum* (W. West) West & West = *Euastrum elobatum*

Euastrum evolutum (Nordst.) West & West = *Euastrum glaziovii* var. *evolutum*

Euastrum pseudopectinatum var. *evolutum* Schmidle = *Euastrum truncatiforme*

Euastrum rostratum Ralfs : according to Ruzicka, this unsufficiently decribed species could be synonym with *Euastrum bidentatum* Näg.

Euastrum spinulosum f. *duplo-minor* West & West = *Euastrum spinulosum* var. *spinulosum*

Micrasterias cunningtonii G.S. West : This species is related to *Micrasterias apiculata* (Ehr.) Menegh. ex Ralfs var. *lacerata* Turm. and needs further revision (RUZICKA 1981: 647).

- Micrasterias incisa* (Kütz.) Bréb. in Ralfs f. *typica* Turn. : *Micrasterias zeylanica*
Penium australe Racib. = *Actinotaenium australe*
Penium navicula Bréb. = *Closterium navicula*
Pleurotaenium caldense Nordst. f. *africanum* G.S. West = *Pleurotaenium eugeneum* var. *africanum*
Pleurotaenium cristatum Turn. f. *africanum* Schmidle = *Pleurotaenium subcoronulatum* var. *africanum*
Pleurotaenium elatum var. *conjunctum* (Turn.) West & West = *Pleurotaenium caldense*
Sphaerosoma papillosum (West & West) Schmidle = *Spondylosium papillosum*
Staurastrum brevispina Bréb. ex Ralfs = *Stauroidesmus brevispina*
Staurastrum brevispina var. *inermis* Wille = *Stauroidesmus brevispina*
Staurastrum corniculatum Lund. var. *spinigerum* W. West f. *latum* Grönb. = *Stauroidesmus corniculatus*
Staurastrum cuspidatum (Bréb.) Ralfs = *Stauroidesmus cuspidatus*
Staurastrum dejectum (Bréb.) Ralfs = *Stauroidesmus dejectus*
Staurastrum dickiei Ralfs = *Stauroidesmus dickiei*
Staurastrum dickiei var. *circularis* Turn. = *Stauroidesmus dickiei* var. *circularis*
Staurastrum dickiei var. *circularis* Turn. f. *majus* Turn. = *Stauroidesmus dickiei* var. *circularis*
Staurastrum disputatum var. *sinense* (Lütken.) West & West = *Staurastrum sinense*
Staurastrum jaculiferum W. West = *Stauroidesmus jaculiferus*
Staurastrum jaculiferum var. *excavatum* West & West, originally described from Scotland is considered very dubious by TEILING (1967: 563).
Staurastrum paradoxum was treated by BROOK (1959) as *Staurastrum anatinum* f. *paradoxum* but this is in conflict with the rules of botanical nomenclature.
Staurastrum pilosum (Bréb. non Näg.) Arch. = *Staurastrum brebissonii*
Staurastrum tohopekaligense f. *quadrangulare* G.S. West : an illegitimate later homonym of *S. tohopekaligense* var. *quadrangulare* West & West, based on a different type
Stauroidesmus convergens f. *minor* (Grönb.) Thom. = *Stauroidesmus convergens* var. *laportei*
Stauroidesmus cuspidatus (Bréb.) Teil. f. *tricuspidatus* (Bréb.) Teil. = *Stauroidesmus cuspidatus*
Stauroidesmus glaber Ehr. f. *limnophilus* Teil. = *Stauroidesmus glaber* var. *limnophilus*
Sphaerosoma excavatum Ralfs = *Teilingia excavata*

ZYGNEMATALES

- Spirogyra decimina* (O.F. Müll.) Kütz. f. *tropica* G.S. West = *Spirogyra columbiana*

CHARALES

- Chara brachypus* A. Br. = *Chara setosa*
Chara brachypus var. *tanganyikae* R.D. W. = *Chara setosa* f. *tanganyikae*
Chara gymnophylla A. Br. = *Chara vulgaris* f. *gymnophylla*
Nitella furcata (Roxb. ex Bruz.) Ag. f. *mucronata* (A. Br.) R.D. W. = *Nitella mucronata*

EUGLENOPHYTA

- Euglena charkowiensis* Swir. = *Euglena oxyuris* f. *charkowiensis*
Strombomonas verrucosa (Dad.) Defl. var. *conspersa* (Pasch.) Defl. and var. *zmiewika* (Swir.) Defl. = *Strombomonas acuminata*

DINOPHYTA

Ceratium hirundinella (O. Müll.) Dujard. var. *brachyceros* (Dad.) Ostenf. = *Ceratium brachyceros*

Ceratium macroceras Schrank = *Ceratium hirundinella*

Glenodinium penardii Lemm. = *Peridiniopsis penardii*

Gymnodinium albulum Lind. = *Gymnodinium lantzchii*

Gymnodinium profundum Schill. = *Gymnodinium lacustre*

Gymnodinium mirabile Penn. = *Gymnodinium uberrimum*

Gymnodinium rotundatum Klebs = *Gymnodinium uberrimum*

Peridinium apiculatum (G.S. West) Lind. = *Peridinium palatinum*

Peridinium berolinense Lemm. = *Peridiniopsis berolinense*

Peridinium berolinense Lemm. var. *apiculata* Lemm. = *Peridiniopsis berolinense*

Peridinium cunningtonii (Lemm.) Lemm. = *Peridiniopsis cunningtonii*

Peridinium inconspicuum Lemm. = remarks for *Peridinium umbonatum*

Peridinium pusillum (Pen.) Lemm. = remarks for *Peridinium umbonatum*

Peridinium umbonatum Stein : POPOVSKY & PFIESTER (1990: 183) used a very broad concept of this species, including *P. inconspicuum* and *P. pusillum*. In view of the limited knowledge of the morphological variability of this group and the lack of profound studies of African populations of this species complex, we prefer to keep these three taxa separate at this stage.

Peridinium volzii Lemm. : POPOVSKY & PFIESTER (1990: 165) considered this species as a synonym of *P. willei* Huitf.-Klass. Although there are clear relationships between these two species, we consider the knowledge of their morphological variability and ecological characteristics as too limited to combine them into one taxon.

Peridinium westii Lemm. : POPOVSKY & PFIESTER (1990: 168) included this species in *P. cinctum* Ehr., but as in the case of *P. volzii*, we prefer to keep them separate at this stage.

Sphaerodinium cinctum (Ehr.) Wolosz. var. *polonicum* (Wolosz.) Hub.-Pest. = *Sphaerodinium cinctum*

CHRYSTOPHYTA

Heterochromonas sp. = *Spumella* sp.

BACILLARIOPHYTA

Achnanthes saxonica Krasske = *Achnanthes oblongella*

Achnanthidium brevipes Ag. var. *intermedium* Kütz. = *Achnanthes brevipes* var. *intermedia*

Achnanthidium inflatum Kütz. = *Achnanthes inflata*

Achnanthidium lanceolatum Bréb. = *Achnanthes lanceolata*

Achnanthidium lanceolatum var. *haynaldii* Istv.-Schaarrsch. = *Achnanthes lanceolata* var. *haynaldii*

Amphora copulata : Observations on material from Lake Tanganyika by one of us (C.C.) displayed a great variability in this taxon. Future thorough study, requiring cultures, is necessary to know whether this is either a valid species or a complex of different taxa.

Amphora lybica Ehr. = *Amphora copulata*

Amphora ovalis (Kütz.) Kütz. var. *affinis* (Kütz.) V.H. = *Amphora copulata*

Amphora ovalis var. *lybica* (Ehr.) Cl. = *Amphora copulata*

Amphora ovalis var. *pediculus* (Kütz.) V.H. = *Amphora pediculus*

Amphora perpusilla Grun. = *Amphora pediculus*

Anomoconeis serians (Bréb.) Cl. = *Brachysira serians*

- Anomoeoneis sphaerophora* var. *biceps* Ehr. = *Anomoeoneis sphaerophora*
Anomoeoneis vitrea (Grun.) Ross = *Brachysira microcephala*
Aulacoseira : Most of the species and infraspecific taxa of this genus were originally treated as *Melosira*; when the combination has not yet validly been published in the genus *Aulacoseira* this is indicated in square brackets e.g. *Aulacoseira italica* (Ehr.) Sim. [var. *plicatella* O. Müll.]; the taxon was described as *Melosira italica* var. *plicatella* O. Müll.; it belongs to the genus *Aulacoseira*, and not to the genus *Melosira*, but research is to be done to see whether this taxon belongs to *A. italica*, to another taxon or deserves recognition.
Asterionella gracillima (Hantzsch) Heib. = *Asterionella formosa*
Aulacoseira distans (Ehr.) Sim. var. *africana* (O. Müll.) Sim. = *Aulacoseira pfaffiana*
Biddulphia aurita (Lyngb.) Bréb. = *Odontella aurita*
Caloneis fasciata (Lgst.) Cl. = *Caloneis bacillum*
Caloneis schumanniana (Grun.) Cl. = *Caloneis limosa*
Caloneis silicula (Ehr.) Cl. = *Caloneis ventricosa*
Caloneis silicula var. *limosa* (Kütz.) VanLandingham = *Caloneis ventricosa* var. *truncatula*
Capartogramma jeanii Kufferath = *Capartogramma karstenii*
Cocconema cistula (Ehr.) W. Smith = *Cymbella cistula*
Cocconema cistula var. *maculatum* (Kütz.) Grun. = *Cymbella cistula* var. *maculata*
Cocconema cymbiforme Ehr. = *Cymbella cymbiformis*
Cocconema gracile (Rabh.) G.S. West = *Cymbella lunata*
Cocconeis hustedtii Krasske = *Achnanthes rupestroides*
Cocconema grossestriatum (Müll.) G.S. West var. *tanganyikae* G.S. West = *Cymbella grossestriata* var. *tanganyikae*
Cocconema laeve Näg. = *Cymbella laevis*
Cocconema leptoceros Ehr. = *Cymbella leptoceros*
Cocconema turgidum (Greg.) G.S. West = *Cymbella elginensis*
Cyclotella comta (Ehr.) Kütz. auct. non (Ehr.) Kütz. = *Cyclotella radiosa*
Cyclotella kuetzingiana Thwaites = *Cyclotella krammeri*
Cyclotella meneghiniana var. *rectangularis* Grun. = *Cyclotella meneghiniana*
Cyclotella meneghiniana var. *rectangulata* (Bréb.) Grun. = *Cyclotella meneghiniana*
Cyclotella operculata Kütz. = *Cyclotella distinguenda*
Cylindrotheca closterium Reiman & Lewin = *Nitzschia closterium*
Cymatopleura elliptica (Bréb.) W. Smith var. *rhomboides* Grun. = *Cymatopleura elliptica* var. *hibernica*
Cymatopleura librile (Ehr.) Pantocsek = *Cymatopleura solea*
Cymatopleura librile var. *apiculata* (W. Smith) Ralfs = *Cymatopleura solea* var. *apiculata*
Cymatopleura solea var. *subconstricta* O. Müll. = *Cymatopleura subconstricta*
Cymatopleura solea var. *subconstricta* O.Mül. f. *minor* O. Müll. = *Cymatopleura solea*
Cymbella gracilis (Rabh.) Cl. = *Cymbella lunata*
Cymbella grossestriata var. *obtusiuscula* O. Müll. = *Cymbella muelleri*
Cymbella heteropleura Ehr. var. *minor* Cl. = *Cymbella subcuspidata*
Cymbella lanceolata (Ehr.) Kirchner = *Cymbella cornuta*
Cymbella minuta var. *silesiaca* (Bleich ex Rabh.) Reimer = *Cymbella silesiaca*
Cymbella rabenhorstii Ross = *Cymbella lunata*
Cymbella cf. *subalpina* Hust. non Meister = *Cymbella* cf. *mendosa*
Cymbella turgida Greg. non Hassal = *Cymbella elginensis*
Cymbella ventricosa Kütz. = *Cymbella minuta*
Diploneis oblongella var. *ovalis* (Hilse) Ross = *Diploneis ovalis*

- Diploneis ovalis* var. *oblongella* (Näg.) Cl. = *Diploneis oblongella*
Epithemia argus var. *amphicephala* Grun. = *Epithemia argus* var. *alpestris*
Epithemia clavata Dickie = *Rhopalodia rhopala*
Epithemia gibba Ehr. var. *ventricosa* V.H. = *Rhopalodia gibba*
Epithemia zebra (Ehr.) Kütz. = *Epithemia adnata*
Epithemia zebra var. *porcellus* Grun. = *Epithemia adnata* var. *porcellus*
Epithemia zebra var. *proboscidea* (Kütz.) Grun. = *Epithemia adnata* var. *proboscidea*
Eunotia biceps Ehr. = *Eunotia flexuosa*
Eunotia gracilis (Ehr.) Rabh. = *Eunotia glacialis*
Eunotia lunaris : This name is a later homonym of *E. lunaris* Bréb. ex Rabh.; according to KRAMMER & LANGE-BERTALOT (1991) the correct name should be *E. bilunaris* (Ehr.) Mills, but Mills did not actually publish this combination which should be validated by a complete reference to the basionym.
Eunotia polydentula Brun var. *perpusilla* Grun. = *Eunotia microcephala*
Eunotia tridentula Ehr. var. *perpusilla* Grun. = *Eunotia microcephala*
Fragilaria elliptica Schumann = *Fragilaria pinnata*
Fragilaria exigua (W. Smith) Lemm. = *Fragilaria construens* var. *exigua*
Fragilaria minutissima Grun. = *Fragilaria pinnata*
Fragilaria mormonorum Grun. = *Fragilaria lapponica*
Fragilaria mutabilis (W. Smith) Grun. = *Fragilaria pinnata*
Fragilaria mutabilis var. *intermedia* Grun. = *Fragilaria intermedia*
Fragilaria undata Smith = *Fragilaria constricta*
Gomphocymbella brunii (Fricke) O. Müll. = *Gomphocymbella beccarii*
Gomphonema acuminatum var. *turris* (Ehr.) Cl. = *Gomphonema augur* var. *turris*
Gomphonema angustatum var. *intermedia* Grun. = *Gomphonema parvulum*
Gomphonema apicetrapezon Kufferath : The original illustration is so poor that it is almost useless (VANLANDINGHAM 1967-1979).
Gomphonema constrictum Ehr. = *Gomphonema truncatum*
Gomphonema constrictum var. *capitatum* (Ehr.) Grun. = *Gomphonema truncatum*
Gomphonema intricatum Kütz. = *Gomphonema dichotomum*
Gomphonema intricatum var. *pumilum* Grun. = *Gomphonema pumilum*
Gomphonema intricatum var. *pusillum* Mayer = *Gomphonema pumilum* ?
Gomphonema intricatum var. *vibrio* (Ehr.) V.H. = *Gomphonema vibrio*
Gomphonema gracile var. *lanceolata* (Kütz.) Cl. = *Gomphonema gracile*
Gomphonema lanceolatum Ehr. = *Gomphonema gracile*
Gomphonema naviculoides W. Smith = *Gomphonema gracile* var. *naviculoides*
Gomphonema parvulum var. *micropus* (Kütz.) Cl. = *Gomphonema parvulum*
Gomphonema subclavatum (Grun.) Grun. = *Gomphonema clavatum*
Gyrosigma spenceri var. *nodifera* (Grun.) Cl. = *Gyrosigma nodiferum*
Melosira agassizii Ostenf. = *Aulacoseira agassizii*
Melosira ambigua (Grun.) O. Müll. = *Aulacoseira ambigua*
Melosira argus O. Müll. = *Aulacoseira argus*
Melosira crenulata (Ehr.) Kütz. var. *tenuissima* Grun. = *Aulacoseira italica* var. *tenuissima*
Melosira distans Ehr. var. *africana* O. Müll. : *Aulacoseira pfaffiana*
Melosira goetzeana O. Müll. = *Aulacoseira goetzeana*
Melosira goetzeana f. *tenuior* O. Müll. = *Aulacoseira goetzeana*
Melosira goetzeana var. *tubulosa* O. Müll. = *Aulacoseira goetzeana*
Melosira granulata (Ehr.) Ralfs = *Aulacoseira granulata*

- Melosira granulata* var. *angustissima* O. Müll. = *Aulacoseira granulata* var. *angustissima*
Melosira granulata var. *muzzanensis* (Meister) Hust. = *Aulacoseira muzzanensis*
Melosira granulata f. *procera* Grun. = *Aulacoseira granulata*
Melosira granulata var. *jonenis* Grun. = *Aulacoseira granulata*
Melosira ikapoënsis O. Müll. = *Aulacoseira ikapoënsis*
Melosira ikapoënsis var. *minor* O. Müll. = *Aulacoseira ikapoënsis* var. *minor*
Melosira ikapoënsis var. *procera* O. Müll. = *Aulacoseira ikapoënsis* var. *procera*
Melosira italica (Ehr.) Kütz. = *Aulacoseira italica*
Melosira italica var. *tenuissima* (Grun.) O. Müll. = *Aulacoseira italica* var. *tenuissima*
Melosira kondeensis O. Müll. = *Aulacoseira kondeensis*
Melosira magnusii O. Müll. = *Aulacoseira magnusii*
Melosira mbasiensis O. Müll. = *Aulacoseira mbasiensis*
Melosira nyassensis O. Müll. = *Aulacoseira nyassensis*
Melosira pyxis O. Müll. = *Aulacoseira pyxis*
Melosira roeseana Rabh. = *Orthoseira roeseana*
Melosira schroederi Wolosz. = *Aulacoseira agassizii*
Melosira schroederi var. *minor* Wolosz. = *Aulacoseira agassizii*
Melosira stricta O. Müll. = *Aulacoseira goetzeana*
Microsiphona potamos Weber = *Skeletonema potamos*
Navicula acrosphaeria Bréb. = *Pinnularia acrosphaeria*
Navicula acrosphaeria var. *sandvicensis* Dickie = *Pinnularia acrosphaeria*
Navicula anglica Ralfs = *Navicula elginensis*
Navicula anglica var. *subsalsa* Grun. = *Navicula elginensis*
Navicula bacilliformis Grun. = *Navicula laevissima*
Navicula cardinalis Ehr. : *Pinnularia cardinalis*
Navicula cryptocephala var. *intermedia* Grun. = *Navicula capitatoradiata*
Navicula cryptocephala var. *veneta* (Kütz.) Rabh. = *Navicula veneta*
Navicula cuspidata var. *ambigua* (Ehr.) Cl. = *Navicula cuspidata*
Navicula dicephala W. Smith = *Navicula elginensis*
Navicula dulcis Patrick = *Navicula perminuta*
Navicula elliptica Kütz. = *Diploneis elliptica*
Navicula exigua var. *capitata* Patrick = *Navicula exigua*
Navicula exigua var. *lanceolata* f. *stigmata* O. Müll. = *Navicula exigua* var. *lanceolata*
Navicula exiguiiformis Hust. : *Navicula decussis*
Navicula exilis Kütz. = *Navicula cryptocephala*
Navicula gastrum f. *minuta* Guermeur = *Navicula gastrum*
Navicula gastrum var. *exigua* (Grég.) Grun. = *Navicula exigua*
Navicula gastrum var. *turgida* f. *stigmata* O. Müll. = *Navicula perlatoides*
Navicula gibba Ehr. = *Rhopalodia gibba*
Navicula halophila var. *subcapitata* Østrup = *Navicula halophila*
Navicula interrupta W. Smith = *Pinnularia mesolepta*
Navicula lanceolata sensu Hustedt = *Navicula pseudolanceolata*
Navicula lanceolata sensu Lange-Bertalot = *Navicula avenacea*
Navicula lanceolata sensu Kützing = *Navicula trivialis*
Navicula lanceolata var. *cymbula* (Donkin) Cl. = *Navicula concentrica*
Navicula limosa Kütz. var. *gibberula* (Kütz.) Grun. = *Caloneis ventricosa* var. *truncatula*
Navicula mesolepta Ehr. = *Pinnularia mesolepta*
Navicula minima var. *atomoides* (Grun.) Cl. = *Navicula minima*

- Navicula muralis* Grun. = *Navicula minuscula* var. *muralis*
Navicula mutica var. *cohnii* (Hilse) Grun. = *Navicula cohnii*
Navicula mutica var. *goeppertiana* (Bleisch) Grun. = *Navicula goeppertiana*
Navicula productum W. Smith = *Neidium productum*
Navicula pseudobacillum Grun. = *Navicula bacillum*
Navicula pupula var. *capitata* Hust. = *Navicula pupula*
Navicula pupula var. *elliptica* Hust. = *Navicula pupula*
Navicula pupula var. *nyassensis* (O. Müll.) L.-B. = *Navicula nyassensis*
Navicula pupula var. *rectangularis* (Greg.) Cl. & Grun. = *Navicula pupula*
Navicula radiosa var. *tenella* (Bréb.) Grun. = *Navicula cryptotenella*
Navicula rhomboides Ehr. = *Frustulia rhomboides*
Navicula rotaeana (Rabh.) Grun. = *Navicula vanheurekii*
Navicula salinarum var. *intermedia* (Grun.) Cl. = *Navicula capitatoradiata*
Navicula seminuloides var. *sumatrana* Hust. = *Navicula seminuloides*
Navicula serians Bréb. ex Kütz. = *Brachysira serians*
Navicula simplex Krasske = *Navicula halophila*
Navicula smithii Bréb. ex W. Smith = *Diploneis smithii*
Navicula sphaerophora Kütz. = *Anomoeoneis sphaerophora*
Navicula spirata Hust. = *Navicula brevissima*
Navicula tanganyikae G.S. West = *Neidium tanganyikae*
Navicula viridis Kütz. = *Pinnularia viridis*
Navicula viridula var. *avenacea* (Bréb. ex Grun.) V.H. = *Navicula avenacea*
Neidium affine var. *longiceps* (Greg.) Cl. = *Neidium affine*
Neidium iridis var. *ampliata* (Ehr.) Cl. = *Neidium ampliatum*
Neidium iridis var. *amphigomphus* (Ehr.) Tempère & Perag. = *Neidium iridis*
Nitzschia : Material from the three East African great lakes belonging to this genus requires extensive study; wrong identifications of some taxa are not excluded.
Nitzschia abbreviata Hust. = *Nitzschia inconspicua*
Nitzschia accomodata Hust. = *Nitzschia palea*
Nitzschia actinastroides (Lemm.) Van Goor = *Nitzschia fruticosa*
Nitzschia amphibia var. *acutiuscula* Grun. = *Nitzschia amphibia*
Nitzschia angustata var. *acuta* Grun. = *Nitzschia angustata*
Nitzschia baccata Hust. = *Nitzschia paleacea*
Nitzschia confinis Hust. = *Nitzschia paleacea*
Nitzschia diserta Hust. = *Nitzschia capitellata*
Nitzschia frustulum (Kütz.) Grun. var. *perminuta* Grun. = *Nitzschia perminuta*
Nitzschia obtusa W. Smith var. *scalpelliformis* Grun. f. *nana* Grun. = *Nitzschia nana*
Nitzschia palea var. *fonticola* Grun. = *Nitzschia fonticola*
Nitzschia palea var. *tenuirostris* Grun. = *Nitzschia capitellata*
Nitzschia perpusilla Rabh. = *Nitzschia inconspicua*
Nitzschia rostellata Hust. = *Nitzschia subacicularis*
Nitzschia subrostrata Hust. = *Nitzschia subacicularis*
Nitzschia thermalis (Ehr.) Auerswald = *Nitzschia umbonata*
Nitzschia tryblionella Hantzsch var. *levidensis* (W. Smith) Grun. = *Nitzschia levidensis*
Nitzschia tryblionella var. *littoralis* (Grun.) Grun. = *Nitzschia littoralis*
Nitzschia tryblionella var. *victoriae* Grun. = *Nitzschia levidensis* var. *victoriae*
Nitzschia umbilicata Hust. = *Nitzschia calida*
Nitzschia vitrea var. *recta* Hantzsch = *Nitzschia recta*

- Pinnularia interrupta* W. Smith = *Pinnularia mesolepta*
Pinnularia interrupta f. *biceps* (Greg.) Cl. = *Pinnularia mesolepta*
Pinnularia stauroptera (Grun.) Rabh. = *Pinnularia gibba*
Pinnularia stauroptera var. *interrupta* Cl. = *Pinnularia gibba*
Rhizosolenia africana Wolosz. = *Rhizosolenia curviseta*
Rhoicosphenia curvata (Kütz.) Grun. = *Rhoicosphenia abbreviata*
Rhopalodia : The varieties of *R. gracilis* and *R. hirundiniformis* were not always easily distinguished from the type variety; many intermediary forms between the varieties were observed. Intensive studies, requiring cultures, may reduce the number of intraspecific taxa.
Rhopalodia ascoidea O. Müll. = *Rhopalodia rhopala*
Rhopalodia asymmetrica O. Müll. = *Rhopalodia rhopala*
Rhopalodia clavata (Dickie) O. Müll. = *Rhopalodia rhopala*
Rhopalodia gibba var. *ventricosa* (Kütz.) H. & M. Peragallo = *Rhopalodia gibba*
Rhopalodia gibberula var. *sphaerula* (Ehr.) O. Müll. = *Rhopalodia gibberula*
Rhopalodia gibberula var. *vanheurckii* O. Müll. = *Rhopalodia gibberula*
Rhopalodia hirundiniformis O. Müll. var. *parva* O. Müll. = *Rhopalodia hirundiniformis*
Rhopalodia parallela (Grun.) O. Müll. = *Rhopalodia gibba* var. *parallela*
Rhopalodia vermicularis O. Müll. = *Rhopalodia rhopala*
Rhopalodia vermicularis f. *perlonga* Fricke = *Rhopalodia rhopala*
Rhopalodia vermicularis f. *recta* Rich. = *Rhopalodia rhopala*
Schizostauron crucicula Grun. ex Cl. = *Capartogramma crucicula*
Schizostauron crucicula f. *gracilior* O. Müll. = *Capartogramma crucicula*
Schizostauron karstenii Zanon = *Capartogramma karstenii*
Stauroneis anceps var. *linearis* Ehr. = *Stauroneis anceps*
Stauroneis karstenii (O. Müll.) Hust. = *Capartogramma karstenii*
Stauroneis kriegei Patrick = *Stauroneis dahomensis*
Stephanodiscus astraea : This invalid name applies to a complex of different taxa, which have not been separated in the past. Now it is split into several species. Recent research on the complex in Lake Nyasa/Malawi (KLEE & CASPER 1992) has already yield the description of two new taxa (*S. muelleri* and *Cyclostephanos malawiensis*). Examination of Lake Tanganyika material belonging to this complex may well prove the occurrence of these two and probably other new species.
Stephanodiscus astraea var. *minutula* (Kütz.) Grun. = *Stephanodiscus minutulus*
Stephanodiscus astraea var. *spinulosus* Grun. = *Stephanodiscus astraea*
Stephanodiscus damasii Hust. = *Cyclostephanos damasii*
Stephanodiscus hantzschii f. *parvus* Cl. & Möller = *Stephanodiscus parvus*
Surirella : The constriction of the valva margins seems to be a variable character, as has been proved by *Surirella engleri*. The variety *constricta* has now been included in *Surirella engleri*. Intensive studies, requiring cultures, may reduce the number of intraspecific taxa.
Surirella bifrons var. *tumida* f. *minor* O. Müll. = *Surirella bifrons* var. *tumida*
Surirella constricta (Ehr.) Ehr. var. *africana* O. Müll. = *Surirella muelleri* Hust. non Forti
Surirella constricta var. *maxima* O. Müll. = *Surirella muelleri* Hust. non Forti
Surirella engleri f. *subconstricta* O. Müll. = *Surirella engleri*
Surirella engleri f. *sublaevis* O. Müll. = *Surirella engleri*
Surirella engleri var. *angustior* O. Müll. = *Surirella engleri*
Surirella engleri var. *constricta* O. Müll. = *Surirella engleri*
Surirella fuellebornii var. *constricta* O. Müll. = *Surirella fuellebornii*
Surirella linearis var. *constricta* Grun. = *Surirella linearis*

Surirella malombae O. Müll. = *Surirella nyassae*

Surirella malombae f. *acuta* O. Müll. = *Surirella nyassae*

Surirella malombae var. *tumida* Ostenf. = *Surirella nyassae*

Surirella muelleri Hust. (1922): This name is a later homonym of *S. muelleri* Forti (1910); more studies are needed to determine whether its recognition is needed; in this case it should be given a new name.

Surirella nyassae var. *engleri* (O. Müll.) Ostenf. = *Surirella engleri*

Surirella nyassae var. *malombae* (O. Müll.) Ostenf. = *Surirella nyassae*

Surirella robusta Ehr. var. *splendida* (Ehr.) V.H. = *Surirella splendida*

Surirella rudis Hust. = *Surirella terryi*

Surirella sparsipunctata var. *laevis* Hust. = *Surirella sparsipunctata*

Surirella tanganyicae G.S. West = *Surirella brevicostata*

Surirella tenera var. *nervosa* Schmidt = *Surirella nervosa*

Surirella tenera var. *subcontracta* Hust. = *Surirella tenera*

Synedra: In view of the very different treatments of the genus in recent treatises (KRAMMER & LANGE-BERTALOT 1991, ROUND et al. 1990) we choose to follow the classical treatment of HUSTEDT (1931-1959).

Synedra actinastroides Lemm. = *Nitzschia fruticosa*

Synedra acus var. *delicatissima* (W. Smith) Grun. = *Synedra radians*

Synedra acus var. *radians* (Kütz.) Hust. = *Synedra radians*

Synedra dorsiventralis O. Müll. = *Synedra nyansae*

Synedra dorsiventralis f. *angustae* O. Müll. = *Synedra nyansae*

Synedra dorsiventralis f. *breviores* O. Müll. = *Synedra nyansae*

Synedra dorsiventralis var. *cymbelliformis* O. Müll. = *Synedra nyansae*

Synedra fasciculata (Ag.) Kütz. = *Synedra tabulata* var. *fasciculata*

Synedra intermedia Grun. = *Synedra tabulata* var. *parva*

Synedra limnetica Lemm. = *Synedra berolinensis*

Synedra tenuissima (Kütz.) Kütz. = *Synedra radians*

Synedra ulna var. *lanceolata* (Kütz.) Grun. = *Synedra ulna*

Synedra ulna var. *splendens* (Kütz.) V.H. = *Synedra ulna*

Synedra ulna var. *splendens* f. *strumosa* O. Müll. = *Synedra ulna*

Synedra ulna var. *vitrea* (Kütz.) Grun. = *Synedra ulna* var. *amphirhynchus*

Synedra vaucheriae Kütz. var. *capitellata* Grun. = *Fragilaria vaucheriae* var. *capitellata*

Synedra victoriae Wolosz. = *Synedra berolinensis*

Tabellaria fenestrata var. *intermedia* Grun. = *Tabellaria fenestrata*

Vanheurckia rhomboides (Ehr.) Bréb. = *Frustulia rhomboides*

Vanheurckia rhomboides var. *saxonica* (Rabh.) G.S. West = *Frustulia rhomboides* var. *saxonica*

Vanheurckia vulgaris (Thwaites) V.H. = *Frustulia vulgaris*

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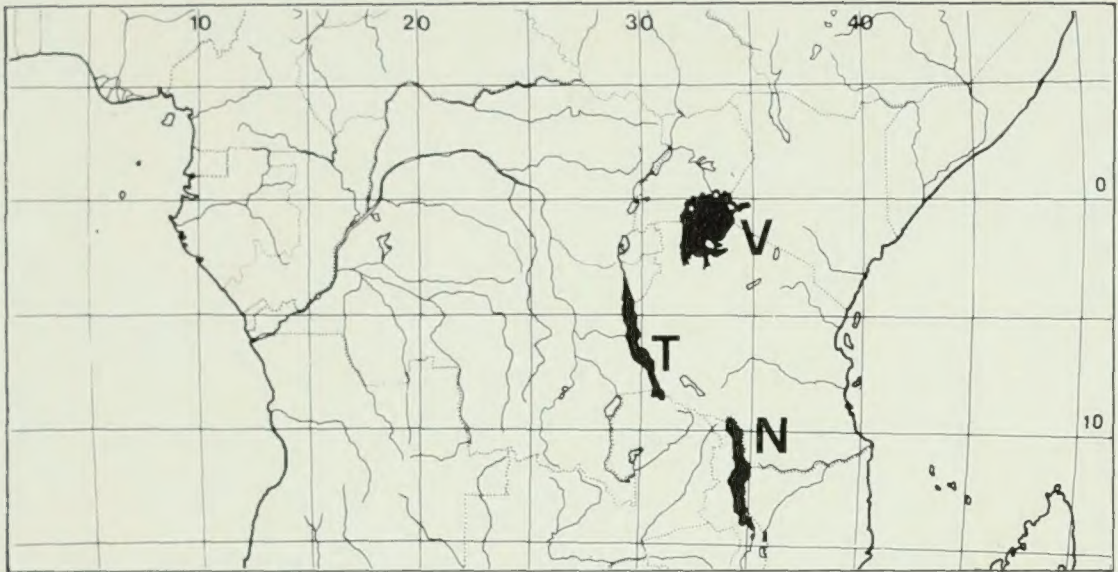
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The East African Great Lakes

Abbreviations used:

N : Lake Nyasa/Lake Malawi

T : Lake Tanganyika

V : Lake Victoria

* : taxon cited from lake(s) under
synonym(s); cf. list of synonyms p. 35

** : cf. nomenclatural or taxonomic
comment in list of synonyms p. 35

[] : used to indicate combinations
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ISBN 90-72619-15-3

ISSN 0779-2387

D/1993/0325/5

The present check-list of the algal flora of the East African great lakes summarizes knowledge on the biodiversity of the phytoplankton and -benthos of these large ecosystems. It will serve all future ecological and limnological research in these impressive parts of tropical Africa.

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